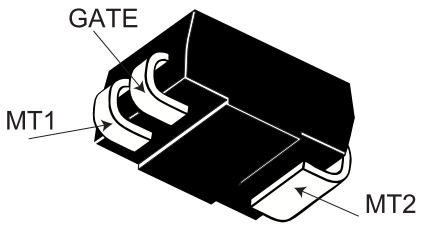
TECCOR ELECTRONICS, INC.

NEW Compak Package

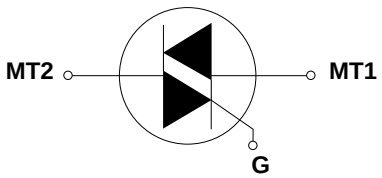


3-Leaded
Surface Mount

Sensitive Gate Triac
0.8 and 1.0 Amp

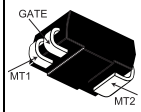
Features

- Surface mount package
- New smaller 3-leaded COMPAK package
- Glass-passivated junctions
- Voltages up to 600 volts
- 0.8 and 1.0 Amp RMS current capacities
- 10 and 5mA gates sensitivities, all quadrants
- Operating temperatures (T_J) from -40°C to +110°C
- Storage temperature (T_S) from -40°C to 150°C
- Packaged in embossed carrier tape at 2,500 devices per reel



ISO 9001
TECCOR ELECTRONICS, INC.

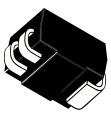
Electrical Specifications

I_T	Part Number	V_{DRM}	I_{GT}				I_{DRM}		V_{TM}	V_{GT}		I_H
RMS On-State current conduction angle of 360° (1)	 COMPAK	Repetitive Peak Off-State Forward & Reverse Voltage (10)	DC Gate Trigger Current V_D=12VDC R_L=60 ohms (2) (13)				Peak Off-State Current Gate Open V_{DRM}=Max Rated Value		Peak On-State Voltage at Max Rated RMS Current (3)	DC Gate Trigger Voltage V_D=12VDC R_L=60 ohms (4) (14)		DC Holding Current (5)(8)
			milliAmps				milliAmps		Volts	Volts		milliAmps
		Volts	QI	QII	QIII	QIV	T_L=25°C	T_L=110°C	T_L=25°C	T_L=25°C	T_L=110°C	
MAX		MIN	MAX				MAX		MAX	MAX	MIN	MAX
0.8 Amp	L2X3	200	3	3	3	3	.01	0.1	1.6	2.0	0.2	5
	L4X3	400	3	3	3	3	.01	0.1	1.6	2.0	0.2	5
	L6X3	600	3	3	3	3	.01	0.1	1.6	2.0	0.2	5
	L2X5	200	5	5	5	5	.01	0.1	1.6	2.0	0.2	10
	L4X5	400	5	5	5	5	.01	0.1	1.6	2.0	0.2	10
	L6X5	600	5	5	5	5	.01	0.1	1.6	2.0	0.2	10
1.0 Amp	L2N3	200	3	3	3	3	.01	0.1	1.6	2.0	0.2	5
	L4N3	400	3	3	3	3	.01	0.1	1.6	2.0	0.2	5
	L6N3	600	3	3	3	3	.01	0.1	1.6	2.0	0.2	5
	L2N5	200	5	5	5	5	.01	0.1	1.6	2.0	0.2	10
	L4N5	400	5	5	5	5	.01	0.1	1.6	2.0	0.2	10
	L6N5	600	5	5	5	5	.01	0.1	1.6	2.0	0.2	10

Notes to Electrical Specifications

1. See Figure 1 for current ratings at specified operating temperatures.
2. See Figure 3 for I_{GT} vs T_L.
3. See Figure 4 for instantaneous on-state current (i_T) vs on-state voltage (v_T)-(typical).
4. See Figure 5 for V_{GT} vs T_L.
5. See Figure 6 for I_H vs T_L.
6. For more than one cycle, see Figure 7.
7. Test conditions, I_{GT}=50mA, pulse width >15µSec., rise time <0.1µSec. See Figure 8 for t_{gt} vs I_{GT}.
8. DC holding current initial on-state current 100mA DC.
9. di/dt test conditions, I_{GT}=50mA with 0.1µSec. rise time.
10. For either polarity of MT2 with reference to MT1.
11. T_L=T_J for test conditions in off-state.
12. Pulse width < 10µSec
13. I_{GT} = The minimum gate current required to switch the thyristor from the off-state to the on-state.
14. For all operating quadrants.

Thermal Resistance (Steady State)

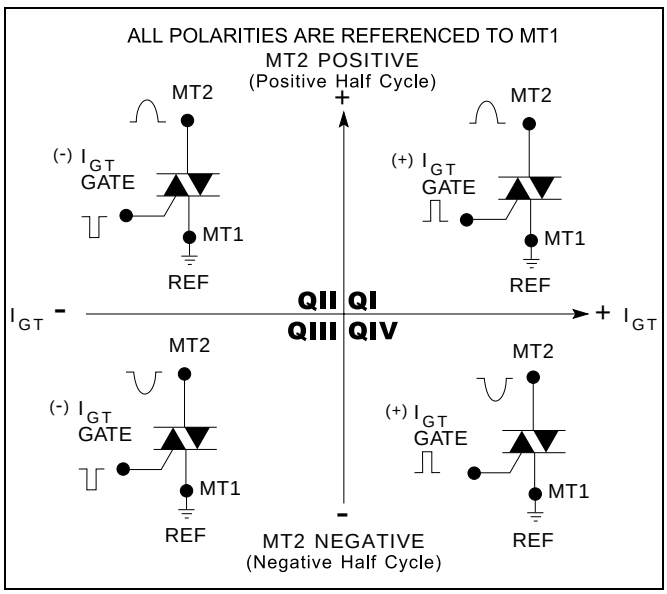


$R_{\theta JL}$ (Typical) °C/W	
0.8A Devices	1.0A Devices
60	40

General Notes

- The lead temperature (T_L) is measured as shown on dimensional outline drawing. See Package Dimensions on the following page.
- All measurements are made at 60Hz with a resistive load at an ambient temperature of +25°C unless otherwise specified.
- Operating temperature (T_J) from -40°C to +110°C
- Storage temperature (T_S) from -40°C to +150°C

Defination of Quadrants

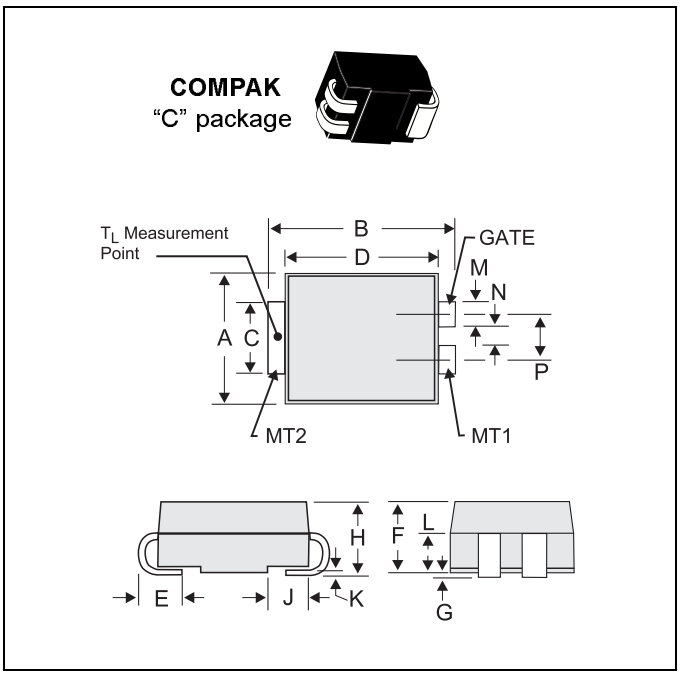


Sensitive Gate Triac 0.8 & 1.0 Amp

I_{GTM}	P_{GM}	$P_{G(AV)}$	I_{TSM}		dv/dt(c)	dv/dt	di/dt	t_{gt}	I^2t
Peak Gate Current (12)	Peak Gate Power Dissipation (12)	Average Gate Power Dissipation	Peak One Cycle Surge Current (1) (6)		Critical Rate-of-Rise of Cummutation Voltage at rated V_{DRM} & $I_{T(RMS)}$ Commutating di/dt=0.54 (1) (10)	Critical Rate-of-Rise of Forward Off-State Voltage	Maximum Rate-of-Change of On-State Current (9)	Gate Controlled Turn-On Time (7)	RMS Surge (Non-Repetitive) On-State Current for a Period of 8.3mSec. for Fusing
Amps	Watts	Watts	Amps		Volts/µSec	Volts/µSec	Amps/µSec	µSec	$Amps^2/Sec$
			60Hz	50Hz					
					TYP	TYP		TYP	
1.0	10	0.2	10	8.3	0.5	40	20	2.8	0.41
1.0	10	0.2	10	8.3	0.5	30	20	2.8	0.41
1.0	10	0.2	10	8.3	0.5	8	20	2.8	0.41
1.0	10	0.2	10	8.3	1.0	40	20	3.0	0.41
1.0	10	0.2	10	8.3	1.0	30	20	3.0	0.41
1.0	10	0.2	10	8.3	1.0	8	20	3.0	0.41
1.0	10	0.2	20	16.7	0.5	40	20	2.8	1.6
1.0	10	0.2	20	16.7	0.5	30	20	2.8	1.6
1.0	10	0.2	20	16.7	0.5	8	20	2.8	1.6
1.0	10	0.2	20	16.7	1.0	40	20	3.0	1.6
1.0	10	0.2	20	16.7	1.0	30	20	3.0	1.6
1.0	10	0.2	20	16.7	1.0	8	20	3.0	1.6

Package Dimensions

COMPAK
"C" package



DIM	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.140	0.155	3.56	3.94
B	0.205	0.220	5.21	5.59
C	0.077	0.083	1.96	2.11
D	0.166	0.180	4.22	4.57
E	0.036	0.056	0.91	1.42
F	0.073	0.083	1.85	2.11
G	0.004	0.008	0.10	0.20
H	0.082	0.092	2.08	2.34
J	0.043	0.053	1.09	1.35
K	0.008	0.012	0.20	0.30
L	0.039	0.049	0.99	1.24
M	0.022	0.028	0.56	0.71
N	0.027	0.033	0.69	0.84
P	0.052	0.058	1.32	1.47

Figure 1: Maximum Allowable Lead Temperature vs. RMS On-State Current

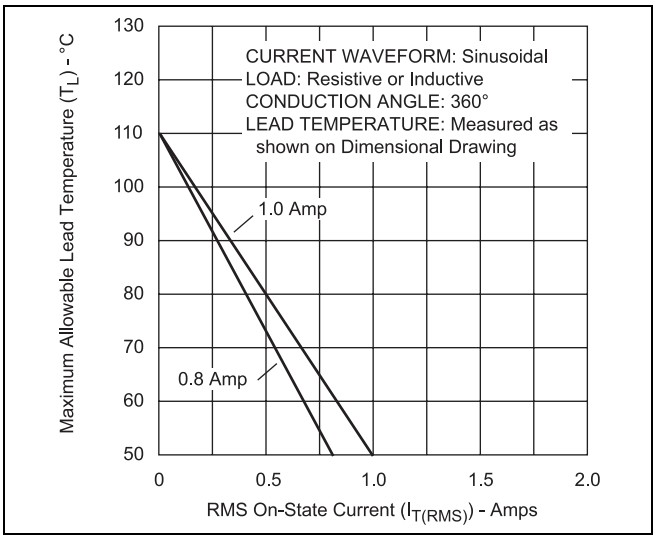


Figure 2: Power dissipation (Typical) vs. RMS On-State Current

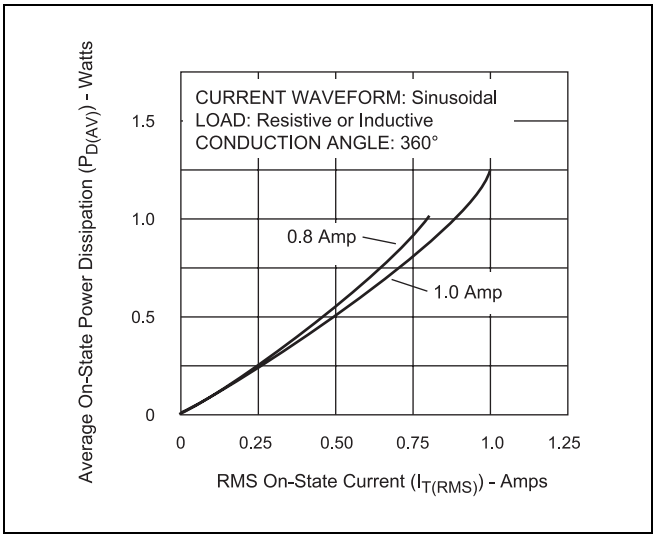


Figure 3: Normalized DC Gate-Trigger Current vs. Lead Temperature

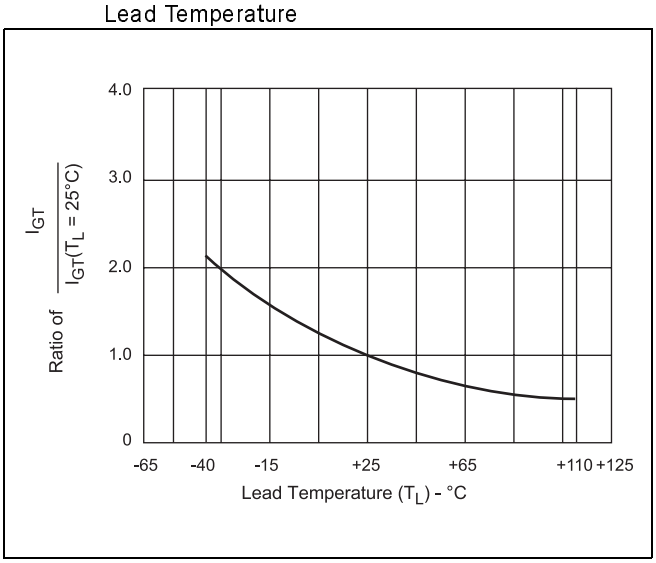


Figure 4: Instantaneous On-State Current vs. On-State Voltage (Typical)

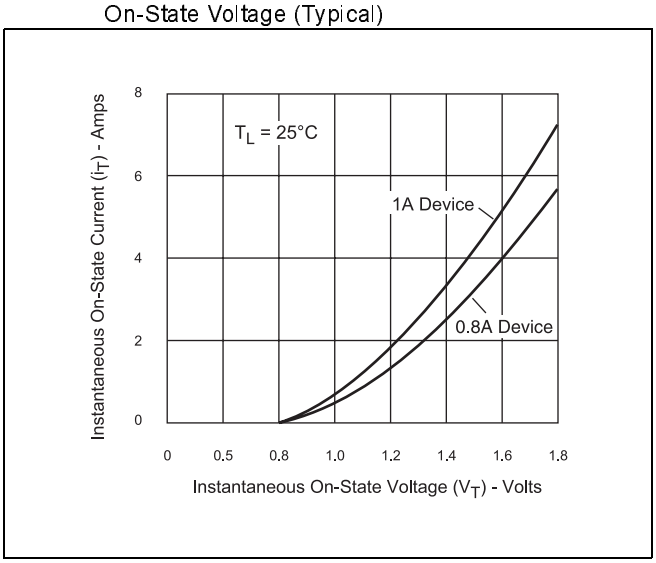


Figure 5: Normalized DC Gate-Trigger Voltage vs. Lead Temperature

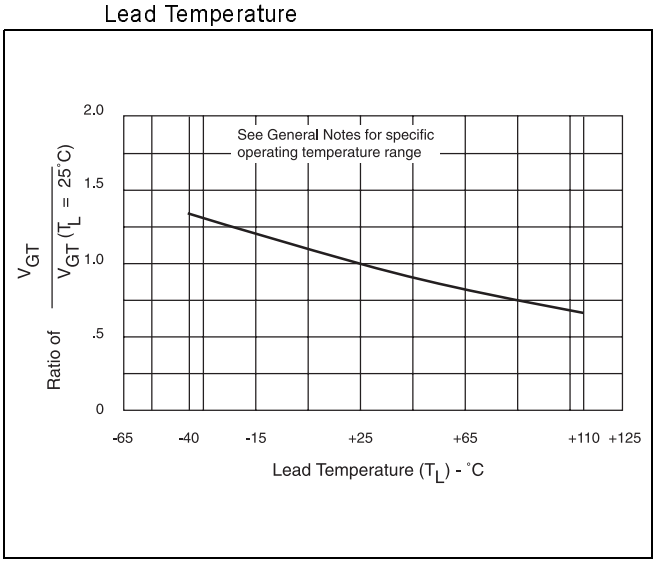


Figure 6: Normalized DC Holding Current vs. Lead Temperature

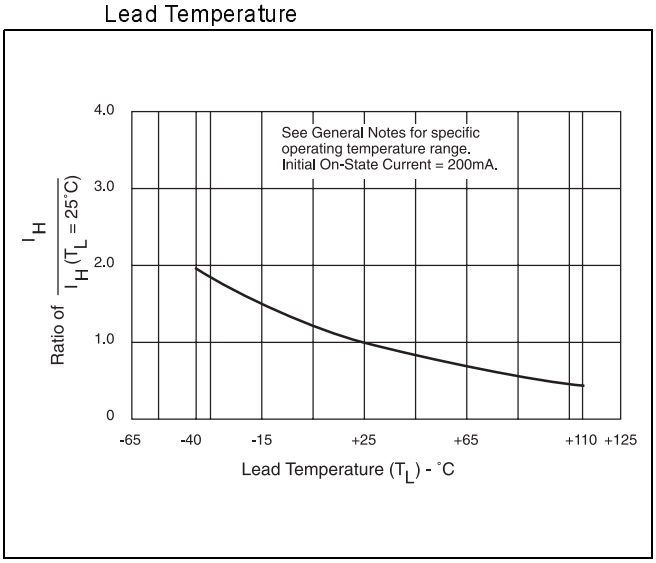


Figure 7: Peak Surge On-State Current vs Surge Current Duration

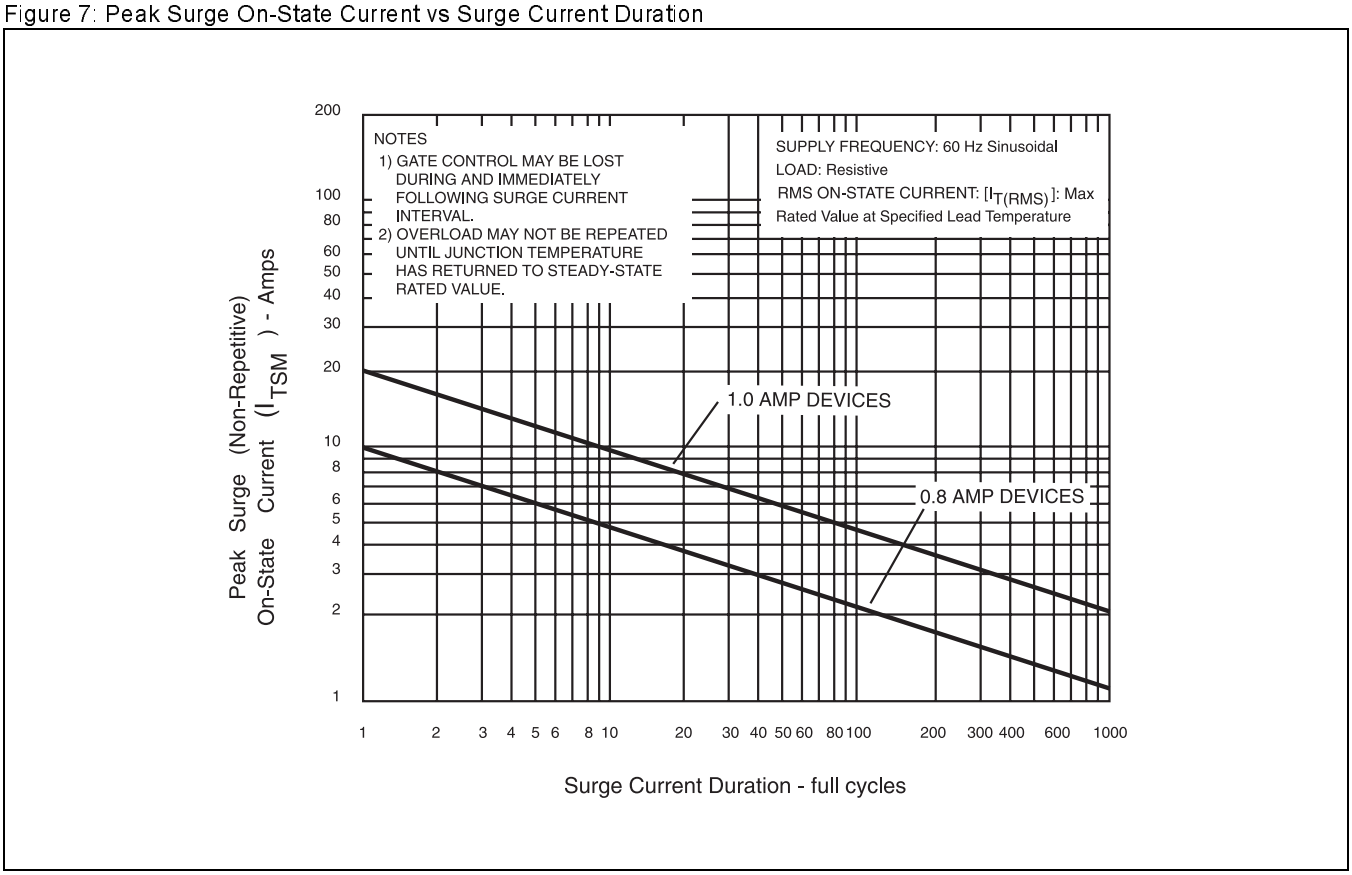
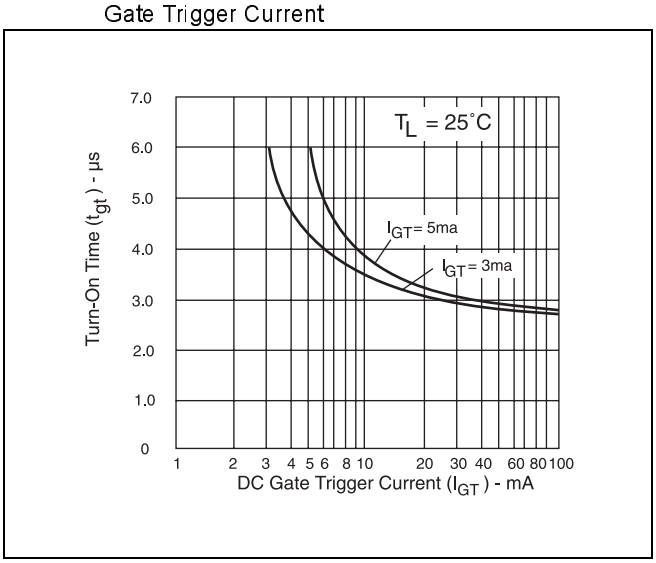
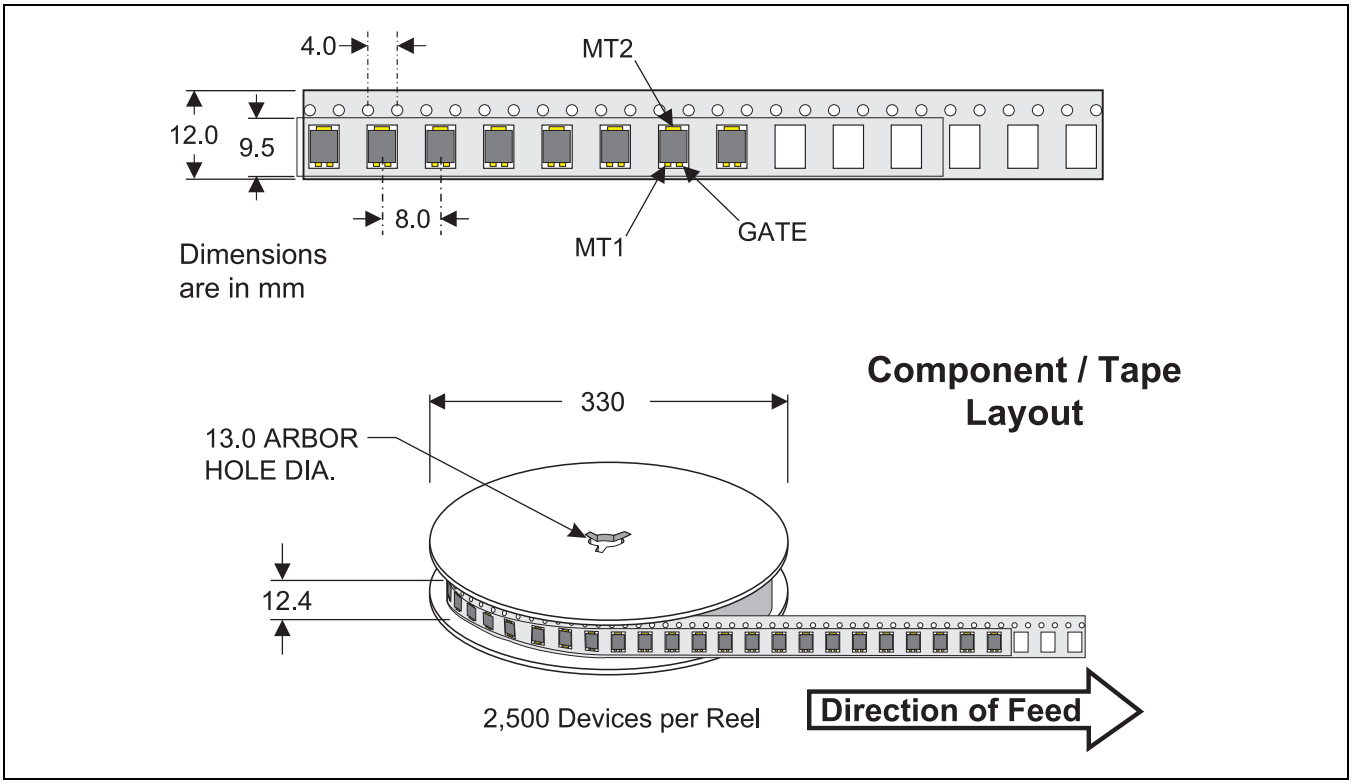


Figure 8: Typical Turn-On Time vs. Gate Trigger Current

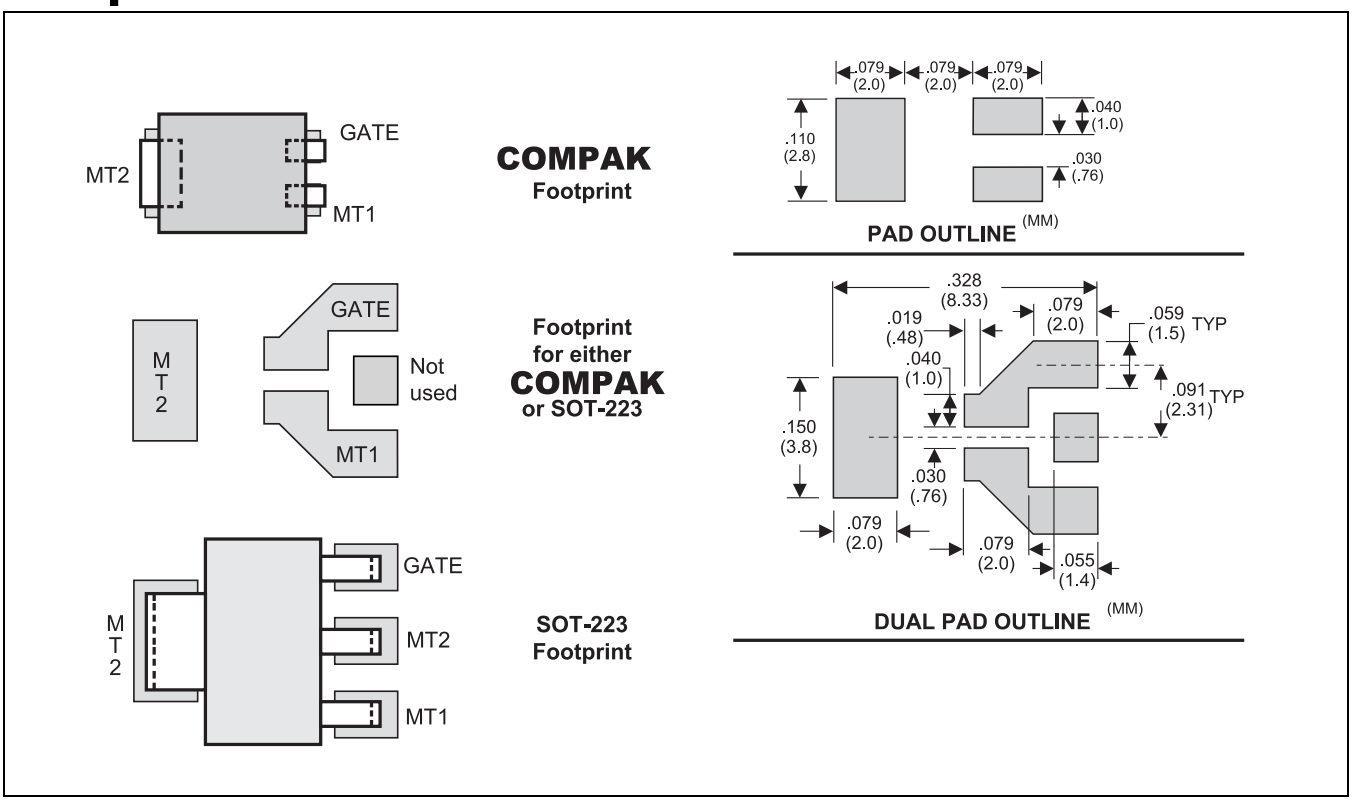


Embossed Carrier Packaging



Standard Reel Pack (RP) for COMPAK (C Package).
Meets all EIA-481-1 Standards.

Footprint Dimensions



New 3-leaded COMPAK package makes more board space available. The COMPAK's footprint is less than half that of the older SOT-223 yet package interchangeability is maintained with proper mounting pad placement.

Notes:

TECCOR ELECTRONICS, INC.
1801 Hurd Drive
Irving, Texas 75038-4385
United States of America

Phone: (972) 580-7777
Fax: (972) 550-1309

Web site: http://www.teccor.com
E-mail: thyristror_techsales@teccor.com
Please contact the factory for further information.

Data Sheet: CompakSGTriac-0698

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