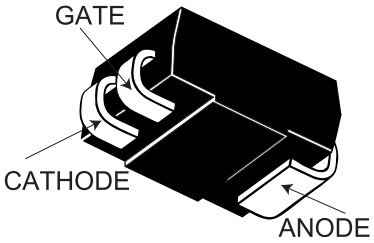
TECCOR ELECTRONICS, INC.

NEW Compak Package

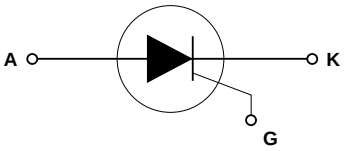


3-Leaded
Surface Mount

SCR
1.0 Amp

Features

- Surface mount package
- New smaller 3-leaded COMPAK package
- Glass-passivated junctions
- Voltages up to 600 volts
- 1.0 Amp RMS current capacity
- 10 mA gate sensitivity
- Operating temperatures (T_J) from -40°C to +125°C
- Storage temperature (T_S) from -40°C to 150°C
- Packaged in embossed carrier tape - 2,500 devices per reel



ISO 9001
TECCOR ELECTRONICS, INC.

Electrical Specifications

Part Number	I_T		V_{DRM} & V_{RRM}	I_{GT}	I_{DRM} & I_{RRM}		V_{TM}	V_{GT}			I_H
	Maximum On-state Current (1)		Repetitive Peak Off-State Forward & Reverse Voltage	DC Gate Trigger Current V_D=12VDC R_L=60Ω (2)	Peak Off-State Current at V_{DRM} & V_{RRM} (11)		Peak On-State Voltage T_L=25°C (3)	DC Gate Trigger Voltage V_D=6VDC RL=100 ohms (4)			DC Holding Current Gate open (5)(8)
COMPAK "C" Package	Amps		Volts	mAmps	µAmps		Volts	Volts			MilliAmps
	RMS	AV			T_L=25°C	T_L=125°		T_L=-40°C	T_L=25°	T_L=125°C	
	MAX		MIN	MAX	MAX		MAX	MAX		MIN	MAX
S0N1	1.0	0.64	50	10	10.0	500	1.6	2.0	1.5	0.2	30
S1N1	1.0	0.64	100	10	10.0	500	1.6	2.0	1.5	0.2	30
S2N1	1.0	0.64	200	10	10.0	500	1.6	2.0	1.5	0.2	30
S4N1	1.0	0.64	400	10	10.0	500	1.6	2.0	1.5	0.2	30
S6N1	1.0	0.64	600	10	10.0	500	1.6	2.0	1.5	0.2	30

Notes to Electrical Specifications

1. See Figures 1 and 2 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}=100mA, 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.
9. di/dt test conditions, I_{GT}=150mA with 0.1µSec. rise time.
10. Test conditions, I_T=1 amp. Pulse duration > 50µSec., dv/dt=20V/µSec., rate-of-rise of current <50µSec., I_{GT}=200mA at turn-on.
11. T_L=T_J for test conditions in off-state.
12. Pulse width < 10µSec

General Notes

- The lead temperature (T_L) is measured as shown on dimensional outline drawing. See "Package Dimensions" section.
- All measurements are made at 60 Hz with a resistive load at an ambient temperature of +25°C unless otherwise specified.
- Operating temperature (T_J) from -40°C to +125°C
- Storage temperature (T_S) from -40°C to 150°C

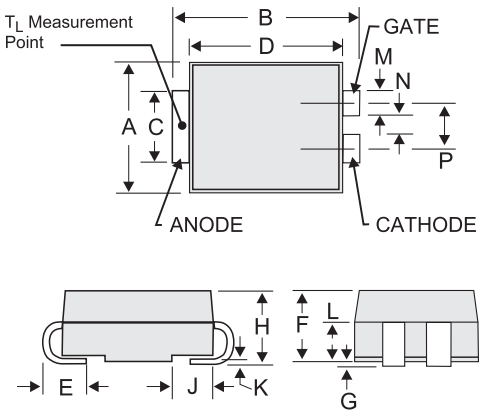
Thermal Resistance (Steady State)

$R_{\theta JL}$ (Typical) °C/W
35

I_{GM}	P_{GM}	$P_{G(AV)}$	I_{TSM}		dv/dt	di/dt	t_{gt}	t_q	I^2t
Peak Gate Current (12)	Peak Gate Power Dissipation (12)	Average Gate Power Dissipation	Peak One Cycle Surge Forward Current (1) (6)		Critical Rate-of-Rise of Forward Off-State Voltage T_L=125°C	Maximum Rate-of-Change of On-State Current (9)	Gate Controlled Turn-On Time (7)	Circuit Commutated Turn-Off Time (10)	RMS Surge (Non-Repetitive) On-State Current for a Period of 8.3ms for Fusing
Amps	Watts	Watts	Amps		Volts/µSec	Amps/µSec	µSec	µSec	$Amps^2$/Sec
			60Hz	50Hz					
					MIN		TYP	MAX	
1.5	15	0.3	30	25	30	50	2.0	35	3.7
1.5	15	0.3	30	25	30	50	2.0	35	3.7
1.5	15	0.3	30	25	20	50	2.0	35	3.7
1.5	15	0.3	30	25	20	50	2.0	35	3.7
1.5	15	0.3	30	25	20	50	2.0	35	3.7

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

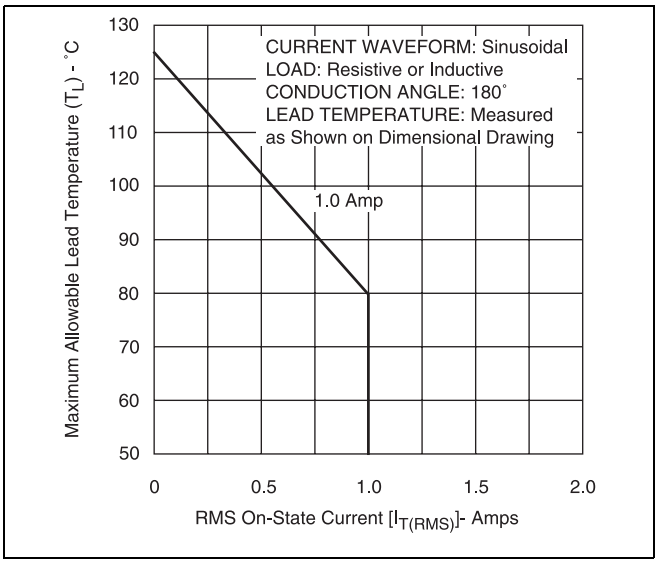


Figure 2: Maximum Allowable Lead Temperature vs. Average On-State Current

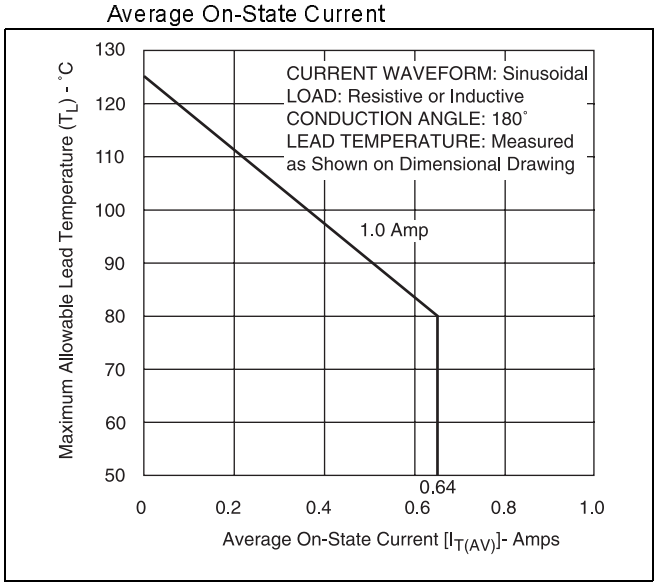


Figure 3: Normalized DC Gate-Trigger Current vs. Lead Temperature

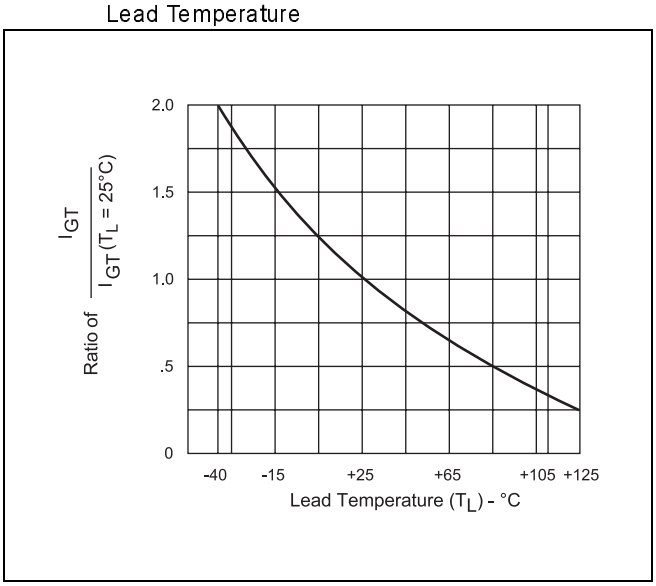


Figure 4: Instantaneous On-State Current vs. On-State Voltage (Typical)

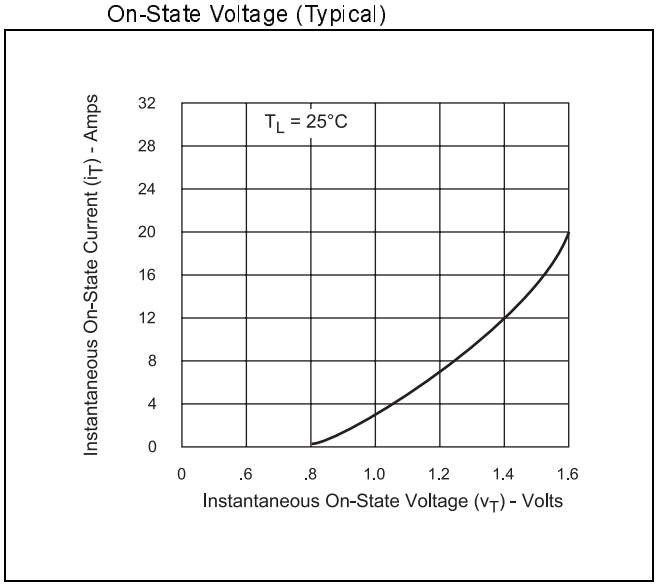


Figure 5: Normalized DC Gate-Trigger Voltage vs. Lead Temperature

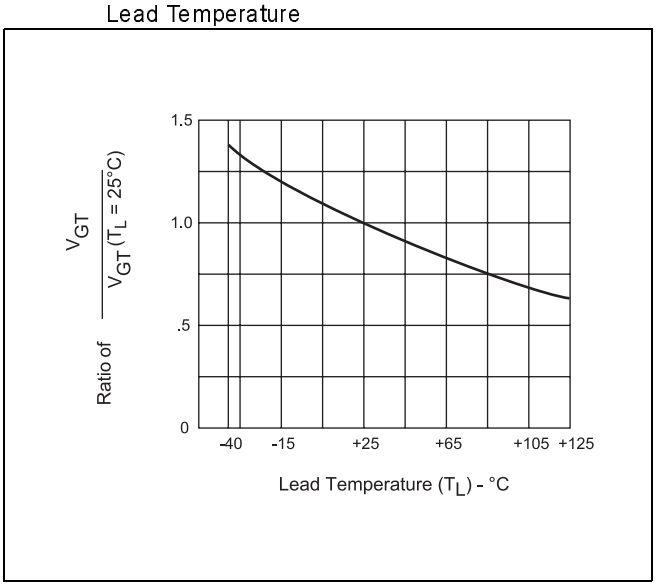


Figure 6: Normalized DC Holding Current vs. Lead Temperature

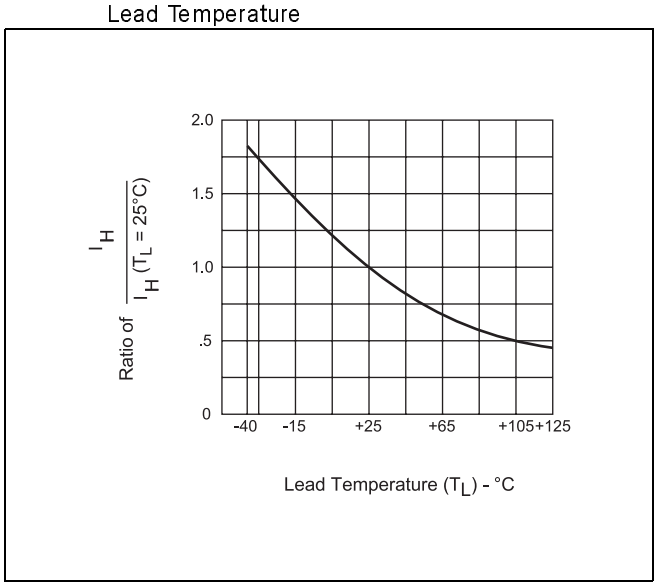


Figure 7: Peak Surge On-State Current vs Surge Current Duration

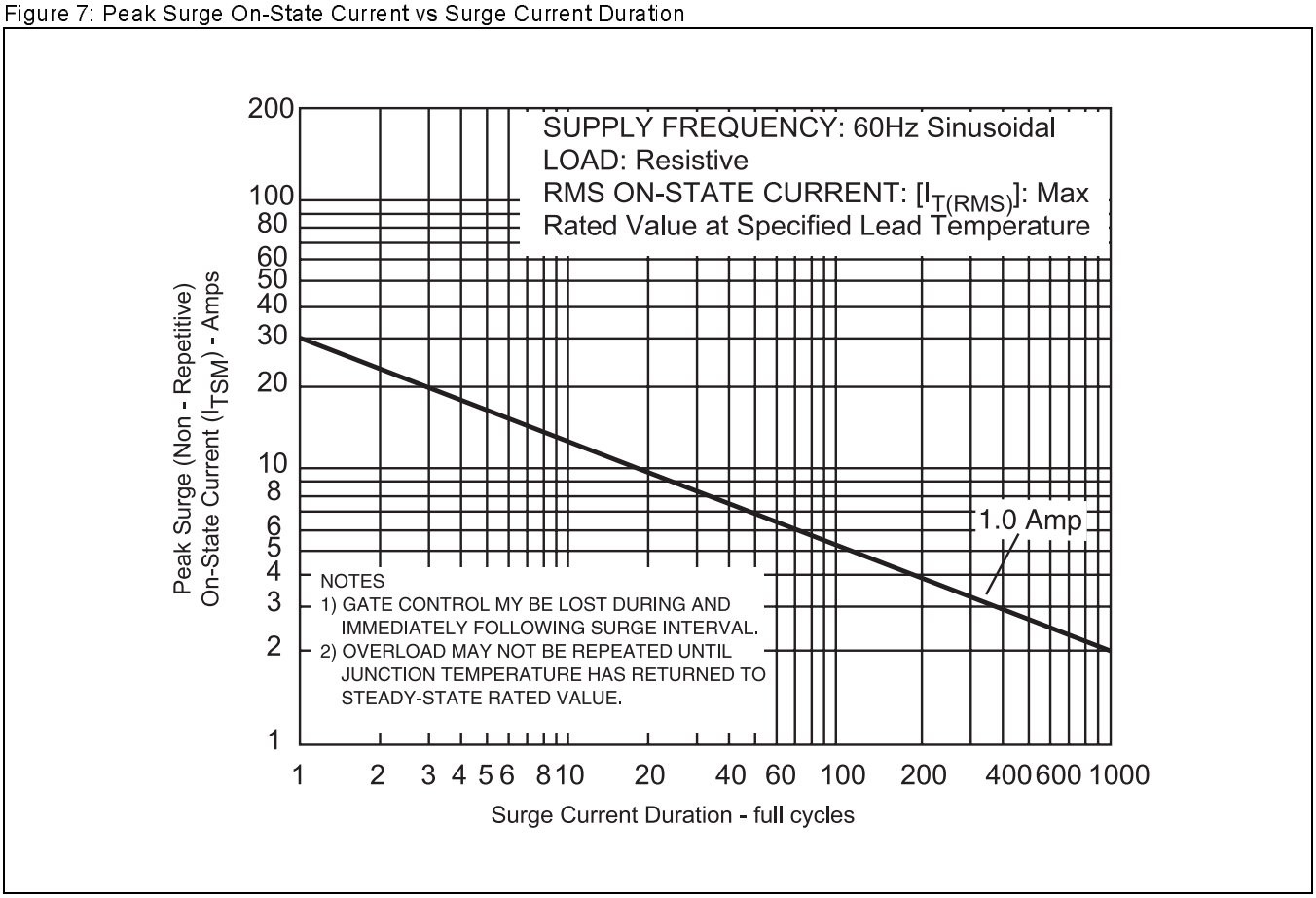


Figure 8: Typical Turn-On Time vs. Gate Trigger Current

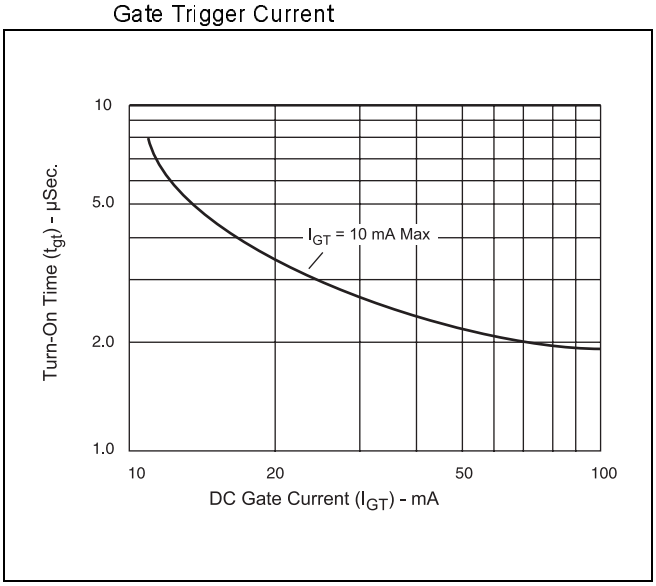
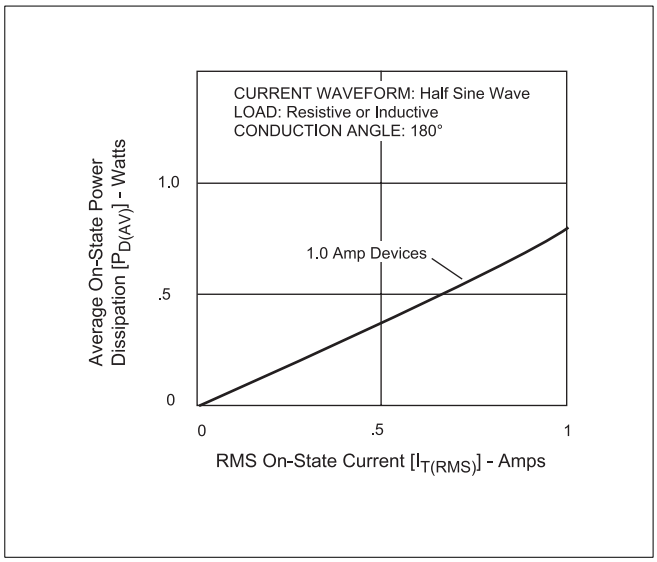
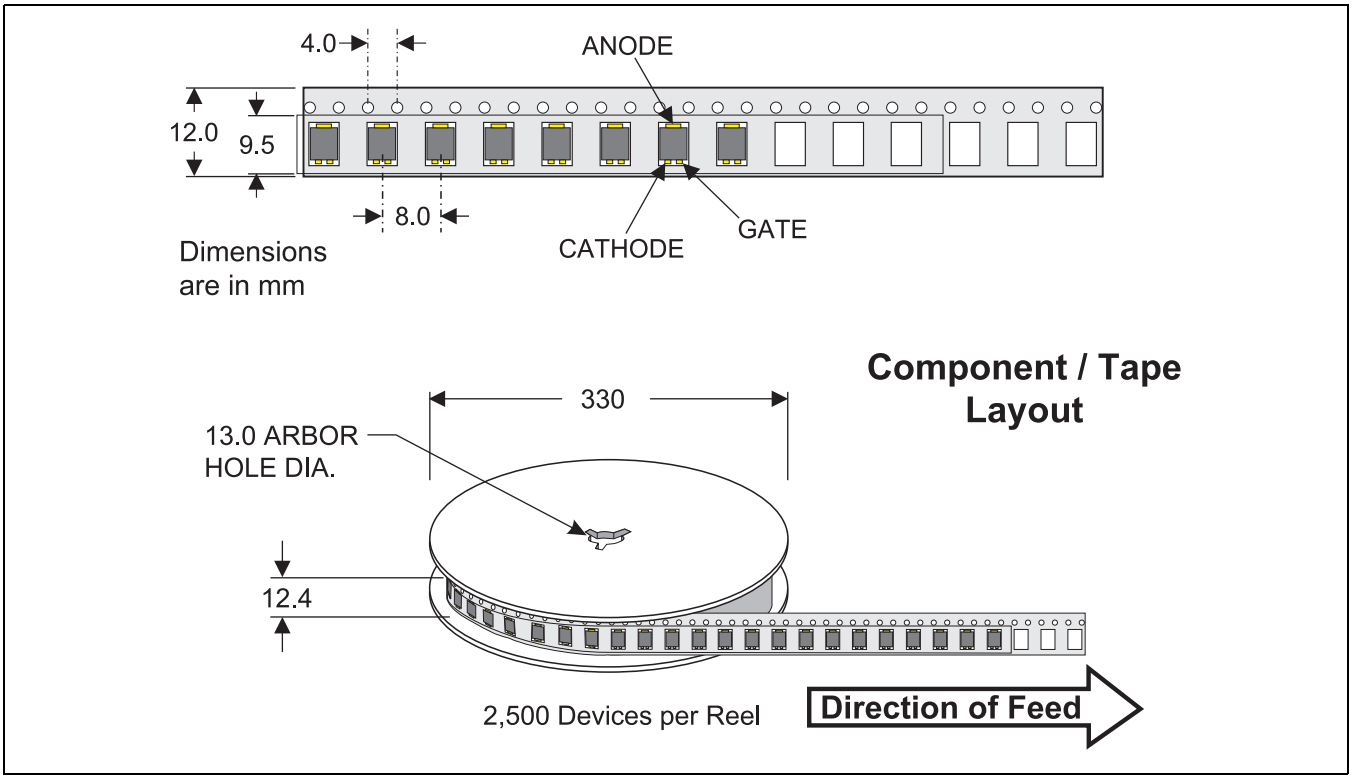


Figure 9: Power dissipation (Typical) vs. RMS On-State Current

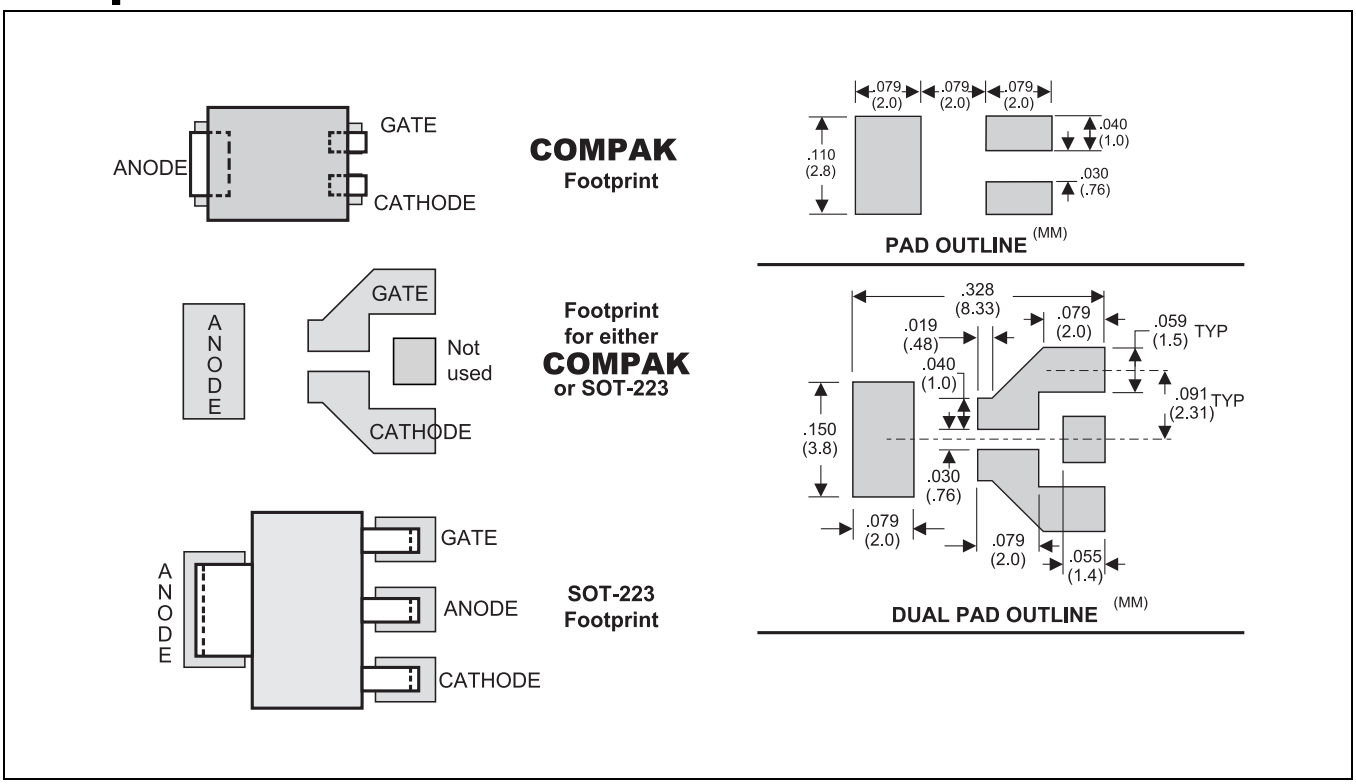


Embossed Carrier Packaging



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:

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Data Sheet: SCR1.0-0698

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