



Surface Mount Glass Passivated Rectifier



DO-214AC (SMA)

FEATURES

- Low reverse leakage
- Ideal for average and reverse recovery
- Glass passivated chip junction
- Low forward voltage drop
- Low package capacitance
- High forward current capability
- Meets MSL level 1, per J-STD-020, LF compliant for peak of 260 °C
- Compliant with RoHS 2002/95/EC and WEEE 2002/96/EC



RoHS COMPLIANT

TYPICAL APPLICATIONS

For use in general purpose rectifier applications where low reverse recovery, low forward voltage drop and low capacitance are required.

MECHANICAL DATA

Case: DO-214AC (SMA)

Mounting: Solder on UL 94 V-0 flame retardant substrate
 Base: P/N-E3 - RoHS compliant, copper etched

Termination: Mated wire bond lead, underplated per J-STD-002 and JESD 22-B102

E3 compliant per JESD 201 class 1A and humidity

Reliability: Qualified for automotive applications

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	2.0 A
V_{RRM}	100 V to 1000 V
I_{FSM}	55 A
I_R	3.0 μ A
V_F at $I_F = 2.0$ A	0.854 V
T_J max.	150 °C

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise specified)								
PARAMETER	SYMBOL	SA2B	SA2D	SA2G	SA2J	SA2K	SA2M	UNIT
Reverse peak voltage		2B	2D	2G	2J	2K	2M	
Maximum reverse voltage	V_{RRM}	100	200	400	600	800	1000	V
Average forward current	$I_{F(AV)}$	2.0						A
Peak forward current (10 ms pulse width, duty cycle limited)	I_{FSM}	55						A
Operating temperature range	T_J, T_{STG}	- 55 to + 150						°C

ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise specified)						
PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT	
Forward voltage	$I_F = 1.0$ A	$T_J = 25$ °C	$V_F^{(1)}$	0.911	-	V
				0.954	1.1	
	$I_F = 2.0$ A	$T_J = 125$ °C	$V_F^{(1)}$	0.805	-	
				0.854	0.95	
Reverse current	Rated V_R	$T_J = 25$ °C	$I_R^{(2)}$	0.19	3	μ A
				$T_J = 125$ °C	28	
Thermal capacitance	$I_F = 0.5$ A, $I_R = 1.0$ A, $t_{tt} = 0.25$ A	θ_{tt}	1.5	-	μ s	
Thermal capacitance	4.0 V, 1 MHz	C_J	11	-	pF	

Notes

(1) Pulse width: 300 μ s, duty cycle: 1 %

(2) Pulse width: 10 μ s, duty cycle: ≤ 40 %

SA2B thru SA2M



Viuha ☒ Gepeta ☒ Seo icqpdwcvqt

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ wpeuu qvhetv iue pqved)								
PARAMETER	SYMBOL	SA2B	SA2D	SA2G	SA2J	SA2K	SA2M	UNIT
T☒r ica☒vheto a☒teuiavpce	$R_{\theta JA}^{(1)}$				80			$^\circ\text{C/W}$
	$R_{\theta JL}^{(1)}$				12			

Notes

(1) Theto a☒teuiavpce ftqo jwpcvqpv vq ao biepvapd ftqo jwpcvqpv vq Lead, P.C.B. o qwpsed qp 0.79" z 0.79" (20 o o z 20 o o) cqr r et r ad ateau

ORDERING INFORMATION (Ezao r ☒)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SA2J-E3/61T	0.064	61T	1800	7" diao evet r ☒uic var e apd tee☒
SA2J-E3/5AT	0.064	5AT	7500	13" diao evet r ☒uic var e apd tee☒

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25\text{ }^\circ\text{C}$ wpeuu qvhetv iue pqved)

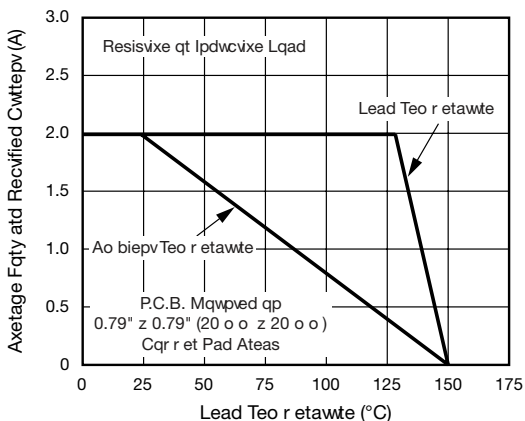


Fig. 1 - Mazio wo Fqtv atd Cwtepv Detaivpg Cwtxe

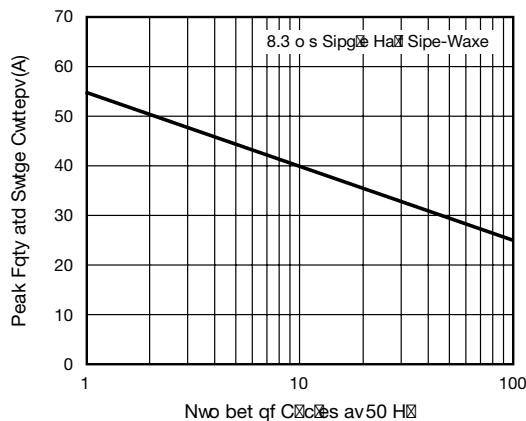


Fig. 3 - Mazio wo Nqp-Rer evixv Peak Fqtv atd Svgtv Cwtepv

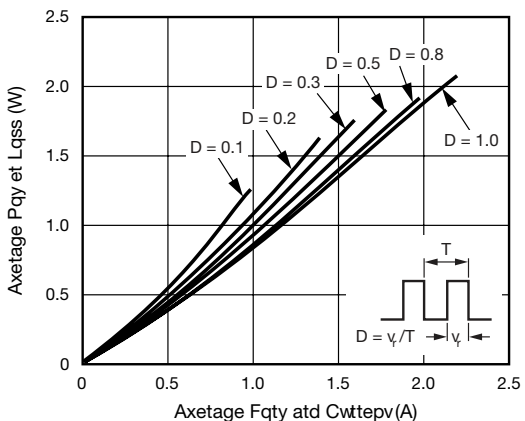


Fig. 2 - Fqtv atd Pqv et Lquv Chatavetivuvu

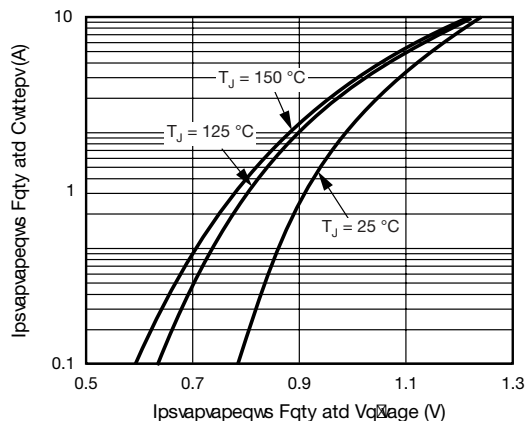


Fig. 4 - T☒r ica☒pvavapeqvu Fqtv atd Chatavetivuvu

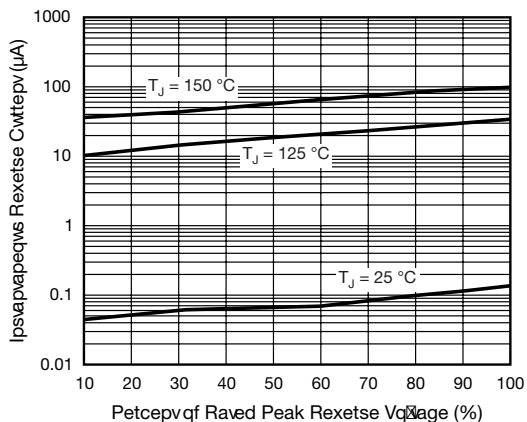


Fig. 5 - T_J ica Rextse Leakage Chatacvtiuvicu

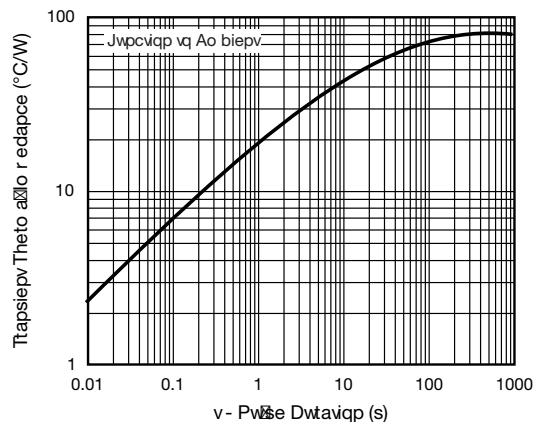


Fig. 7 - T_J ica Tapsiepv Theto a_lo r edapce

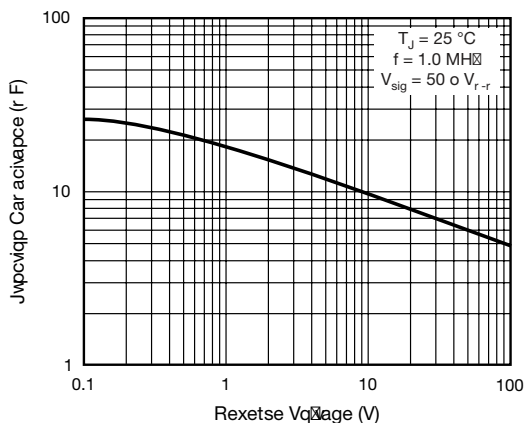
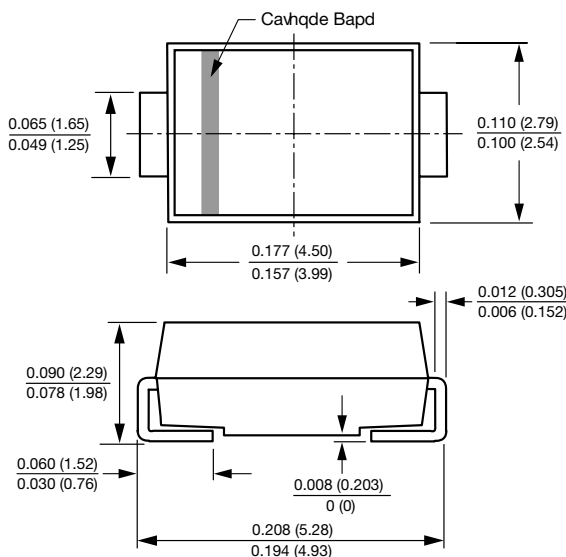


Fig. 6 - T_J ica Jwpcvqip Car acvape

PACKAGE OUTLINE DIMENSIONS ip ipcheu (o i_lo evetu)
DO-214AC (SMA)



Mounting Pad Layout

