Surface Mount Ultrafast Power Rectifiers

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Built-in strain relief
- Ultrafast recovery time for high efficiency
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

DO-214AB (SMC)

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: DO-214AB (SMC)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

Base P/N with prefix "H" on packing code - AEC-Q101 qualified

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.21 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)								
PARAMETER	SYMBOL	MUR 305S	MUR 310S	MUR 315S	MUR 320S	MUR 340S	MUR 360S	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	3						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	75						A
Maximum instantaneous forward voltage (Note 1) I_F= 3 A, 25℃ I_F= 3 A, 150℃	V_F	0.875 0.710				1.25 1.05		V
Maximum reverse current @ rated VR T_J=25 ℃ T_J=150 ℃	I_R	5 150				10 250		μA
Maximum reverse recovery time (Note 2)	Trr	25				50		ns
Typical thermal resistance	$R_{\theta JL}$	11						^{O}C/W
Operating junction temperature range	T_J	- 55 to +175						^{O}C
Storage temperature range	T_{STG}	- 55 to +175						^{O}C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
MUR3xxS (Note 1)	Prefix "H"	R7	Suffix "G"	SMC	850 / 7" Plastic reel
		R6		SMC	3,000 / 13" Paper reel
		M6		SMC	3,000 / 13" Plastic reel

Note 1: "xx" defines voltage from 50V (MUR305S) to 600V (MUR360S)

EXAMPLE					
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
MUR360S R7	MUR360S		R7		
MUR360S R7G	MUR360S		R7	G	Green compound
MUR360SHR7	MUR360S	H	R7		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

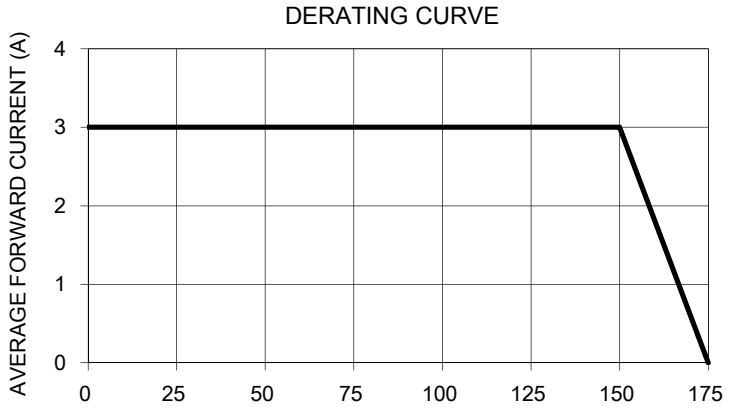


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

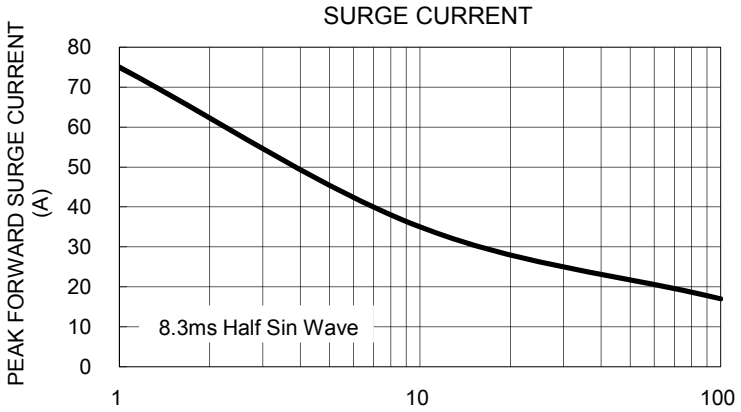


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

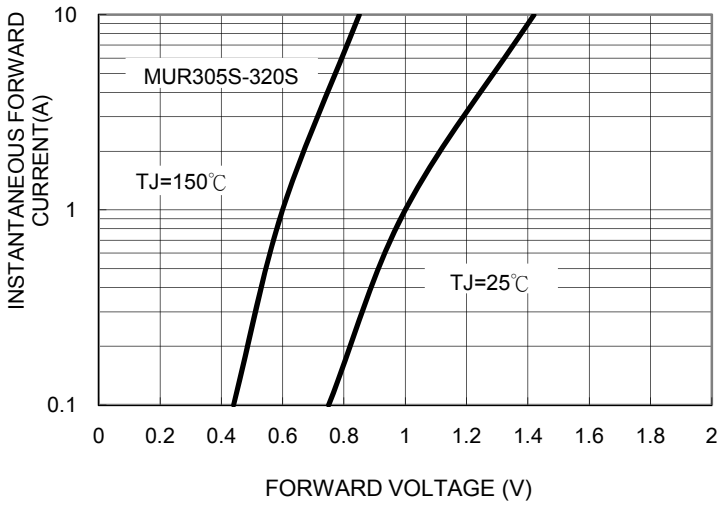


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

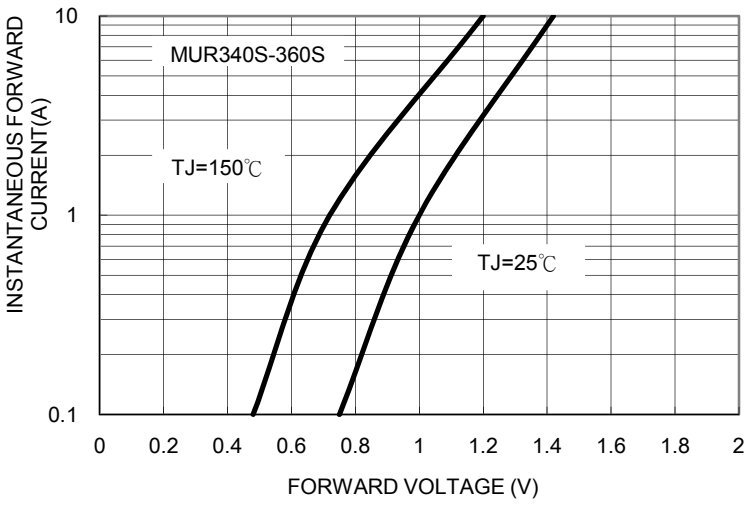


FIG. 5 TYPICAL REVERSE CHARACTERISTICS

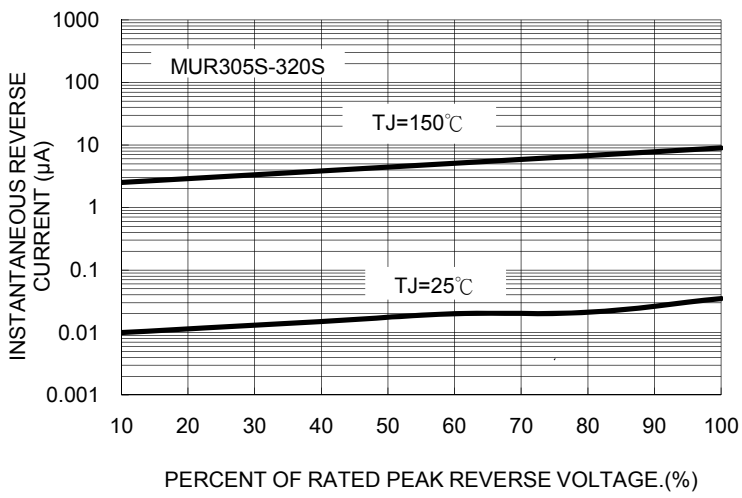


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

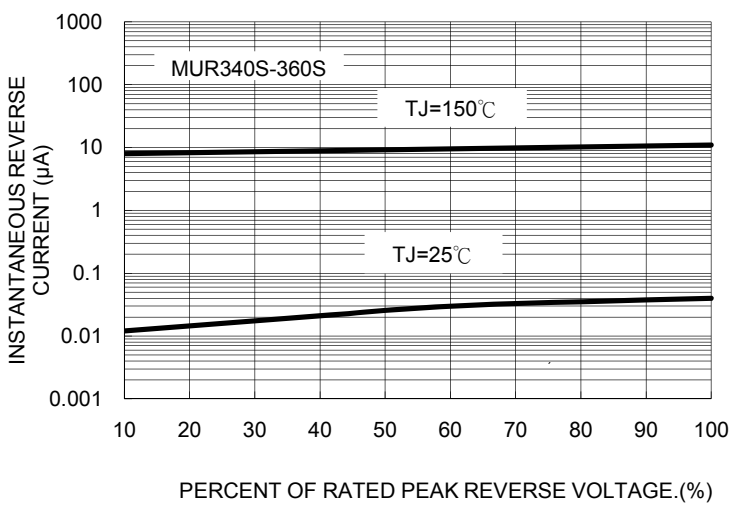
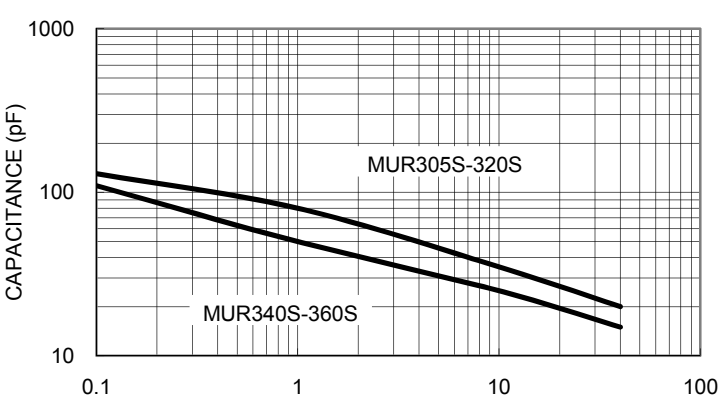
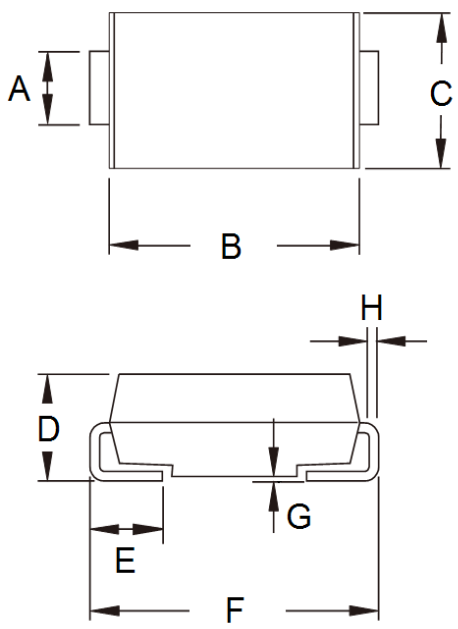


FIG. 7 TYPICAL JUNCTION CAPACITANCE

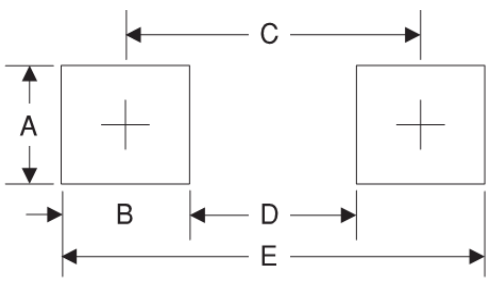


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.00	2.62	0.079	0.103
E	1.00	1.60	0.039	0.063
F	7.75	8.13	0.305	0.320
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	3.3	0.130
B	2.5	0.098
C	6.8	0.268
D	4.4	0.173
E	9.4	0.370

MARKING DIAGRAM

P/N = Specific Device Code
G = Green Compound
YW = Date Code
F = Factory Code

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