

**SURFACE MOUNT
SUPER FAST RECTIFIERS**

**REVERSE VOLTAGE – 600 Volts
FORWARD CURRENT – 1 Amperes**

FEATURES

- Glass passivated chip
- Super fast switching time for high efficiency
- Low forward drop voltage and high current capability
- Low reverse leakage current
- For surface mounted applications
- Qualification is according to AEC-Q101 Rev_C

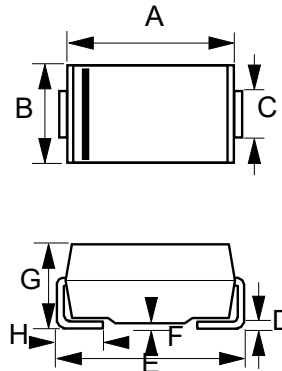
FEATURES

- Use in high frequency rectification
- Freewheeling application in switching mode converter

MECHANICAL DATA

- Case: JEDEC DO-214AC
- Case Material: "Green" Molding compound, UL flammability classification 94V-0, "Halogen-free".
- Moisture Sensitivity: Level 1 per J-STD-020C
- Lead free finish, RoHS compliant
- Polarity: Color band denoted cathode
- Weight: 0.002 ounces, 0.069 grams (Approximate)
- Marking code:U1J

SMA



SMA		
DIM	MIN	MAX
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52

All dimension in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Maximum DC blocking voltage	V_{DC}	600	V
Maximum Average rectified forward current	I_{AV}	1	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	35	A
Operating and Storage temperature range	T_J, T_{STG}	-55 ~ +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX	UNIT
Forward voltage (Note 1)	$I_F = 1A$	$T_J = 25^\circ C$	V_F	1.25	V
Reverse leakage current	$V_R = 600V$	$T_J = 25^\circ C$	I_R	5.0	uA
		$T_J = 150^\circ C$		150	
Typical junction capacitance (Note 2)			C_J	13	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3)	R_{thJc}	18	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Reverse recovery time	$I_F = 0.5A, I_{rr} = 0.25A, I_R = 1.0A$	T_{RR}	50	nS

Note :

- (1) 300us pulse width, 2% duty cycle
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
- (3) Thermal Resistance test performed in accordance with JESD-51.

REV. -1, Sep-2019, KSGA25

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RATING AND CHARACTERISTIC CURVES MURS160A



FIG.1- FORWARD CURRENT DERATING CURVE

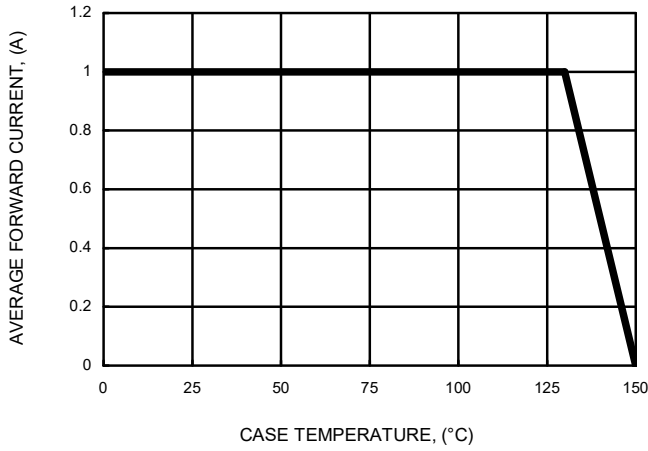


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

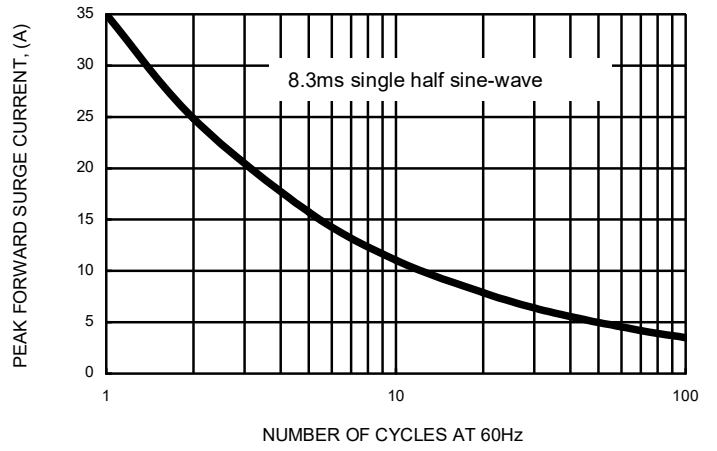


FIG.3- TYPICAL FORWARD CHARACTERISTICS

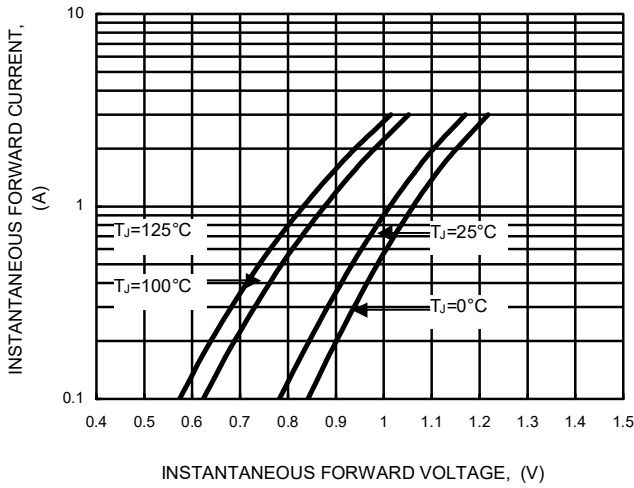


FIG.4- TYPICAL JUNCTION CAPACITANCE

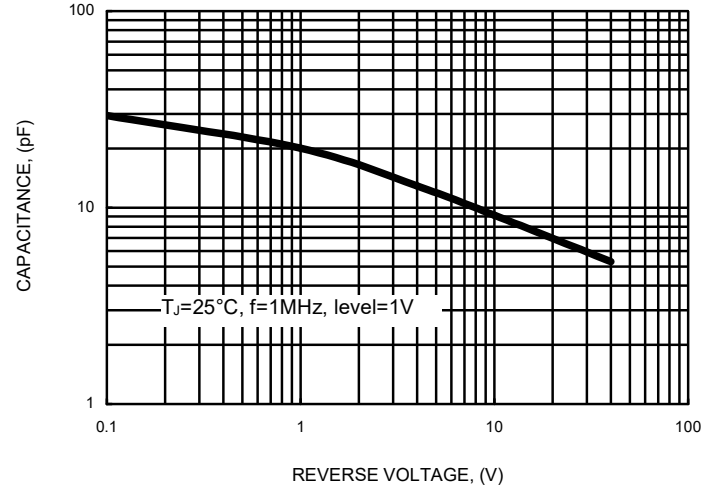
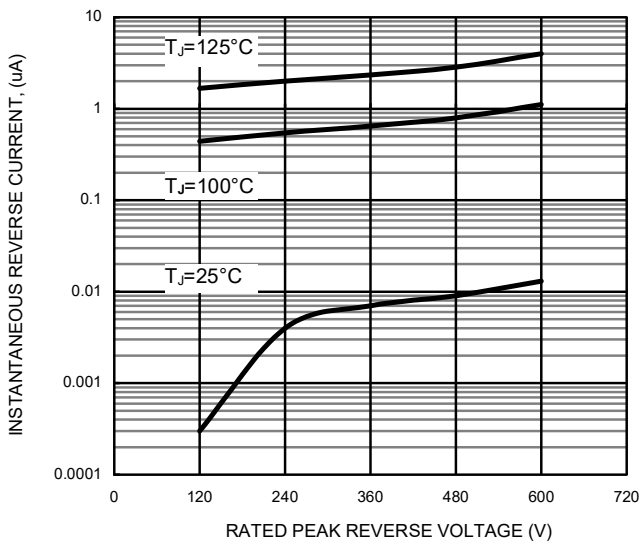
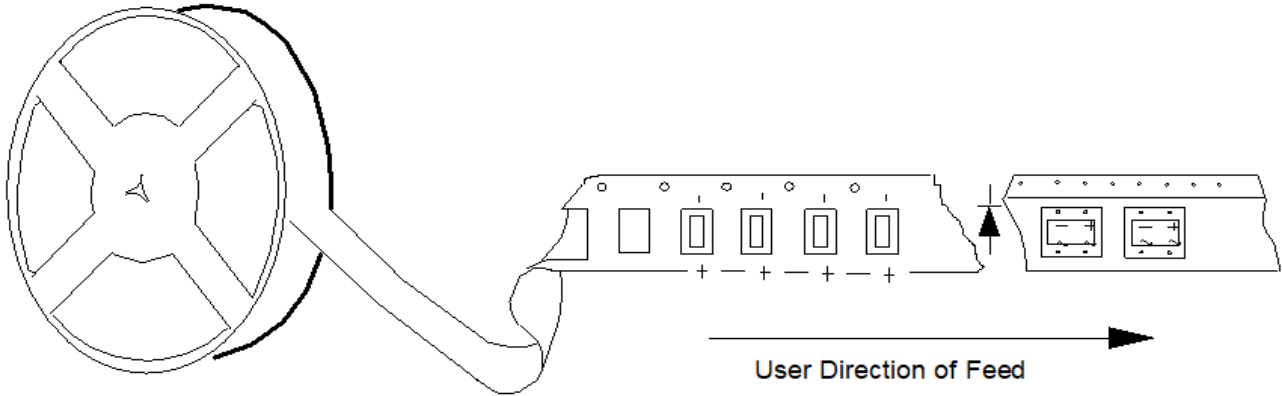


FIG.5- TYPICAL REVERSE CHARACTERISTICS



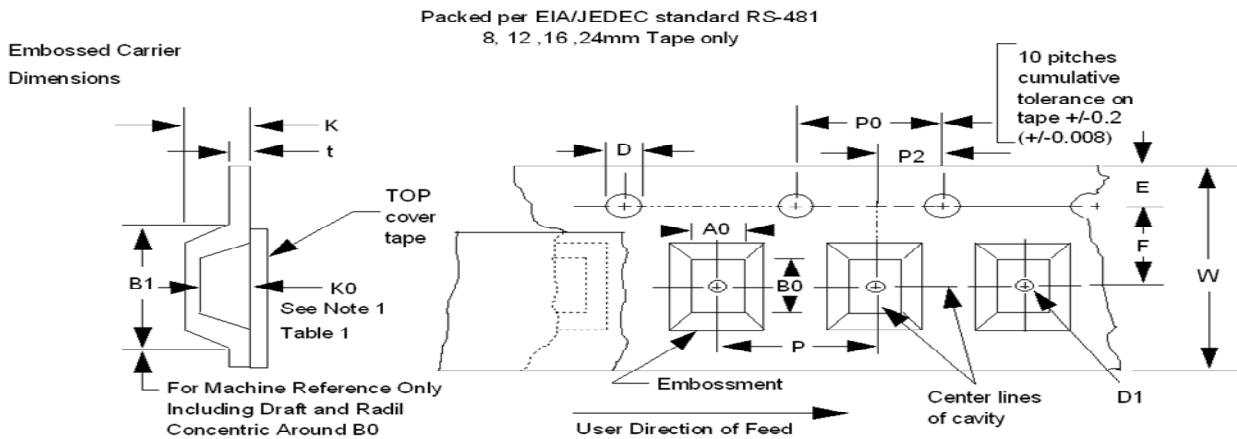
Packaging Information

Polar Units



DEVICE	Q'TY/REEL (PCS)	REEL DIA. (mm)	BOX SIZE (mm)	Q'TY/BOX (PCS)	CARTON SIZE (mm)	Q'TY/CARTON (PCS)
MURS160A	5K	330	340X340X21	5K	350X350X340	60K

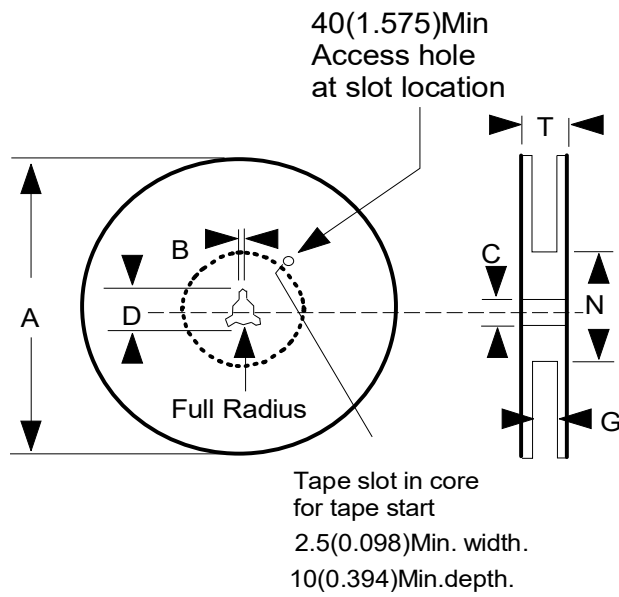
Embossed Carrier Dimensions Information



TAPE SIZE	D	E	PO	t(MAX)	W	P	UNIT
12mm	1.55+0.10/-0.0	1.75±0.10	4.0+0.1	0.4	12.0±0.30	4.0±0.1	mm
	B1(MAX)	D1(MIN)	F	K(MAX)	P2	A0B0K0	
	8.2	1.5	5.5±0.1	4.5	2.0±0.05	SEE NOTE 1	

Note 1: A0B0K0 are determined by component size. The clearance between the component and the cavity must be within 0.05 min. to 0.50 max. for 8 mm tape. 0.05 min. to 0.65 max. for 12mm tape. 0.15 min. to 0.90 max. for 16mm tape and 0.05 min. to 1.00 max. for 24 mm tape and larger.

PACKAGING AND CARRIER DIMENSIONS INFORMATION
MURS160A



TAPE SIZE	A MAX	B MIN	C	D MIN	N	G	T MAX	UNIT
12mm	178/330	1.5	13.0+/-0.5	20.2	75	12.4+2.0/-0.0	18.4	mm

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