

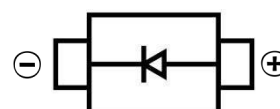
ULTRA FAST RECOVERY RECTIFIER DIODE

FEATURES

- Low reverse leakage current
- Low forward voltage drop, Low power loss
- High current capability
- Surface Mount device



SMB



MECHANICAL DATA

- Case: SMB(DO-214AA)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.088 grams (approximate)

MAXIMUM RATINGS AND CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MUR 105S	MUR 110S	MUR 115S	MUR 120S	MUR 140S	MUR 160S	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)}	1						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	40				35		A
Maximum instantaneous forward voltage (Note 1) @ 1 A, T _J =25°C @ 1 A, T _J =150°C	V _F	0.875 0.710				1.25 1.05		V
Maximum reverse current @ rated VR T _J =25 °C T _J =150 °C	I _R	2 50				5 150		µA
Maximum reverse recovery time (Note 2)	T _{rr}	25				50		ns
Typical thermal resistance	R _{θJL}	17						°C/W
Operating junction temperature range	T _J	- 55 to +175						°C
Storage temperature range	T _{STG}	- 55 to +175						°C

Note 1: Pulse test with $PW=300\mu\text{s}$, 1% duty cycle

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

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Typical Characteristics

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

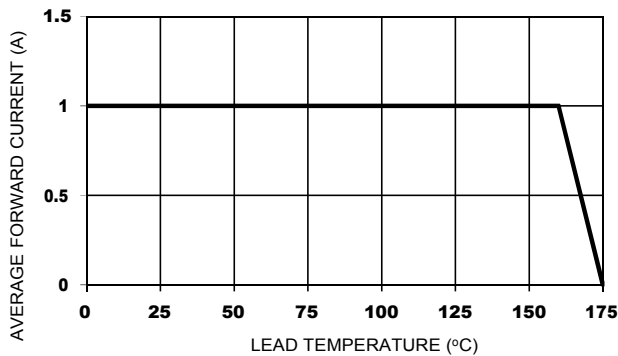


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

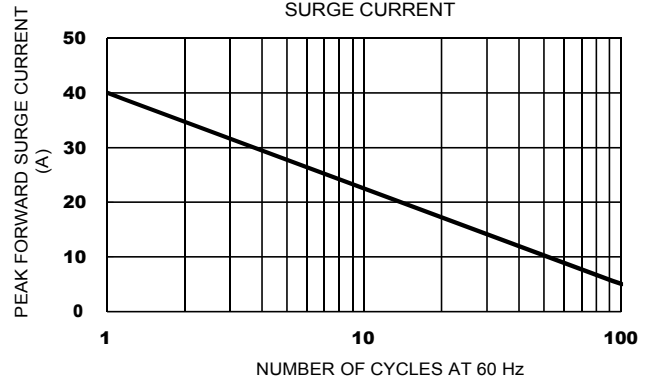


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

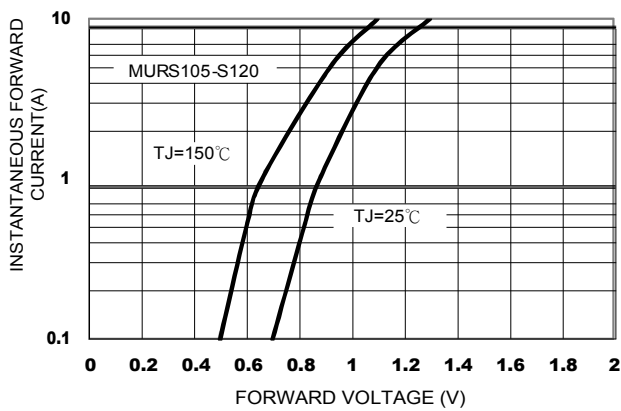


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

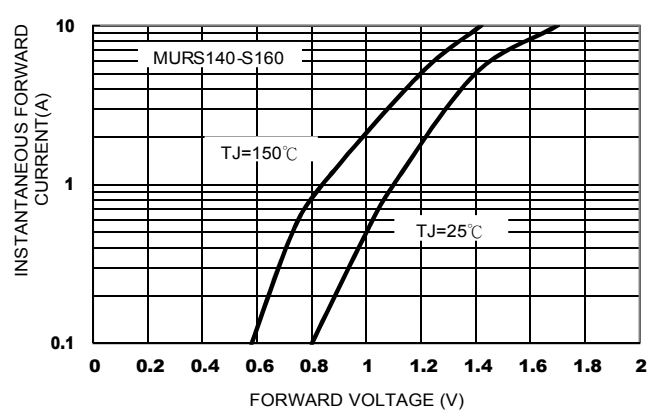


FIG. 5 TYPICAL REVERSE CHARACTERISTICS

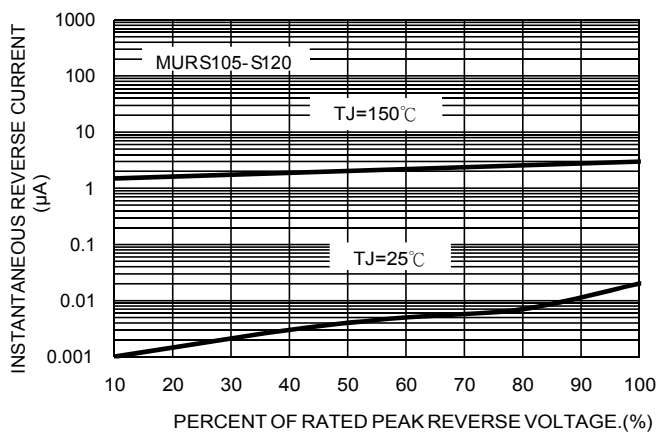


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

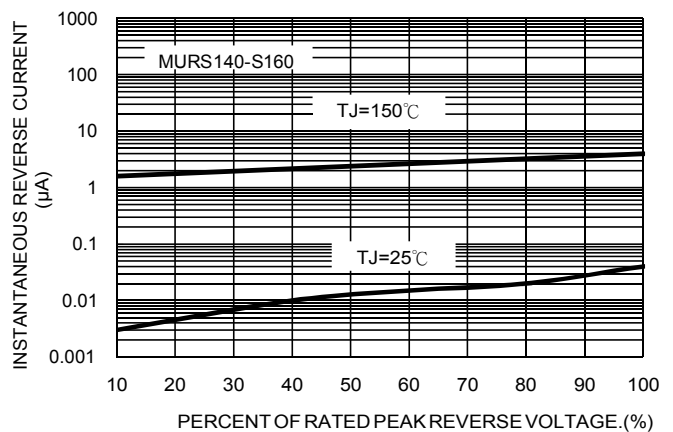
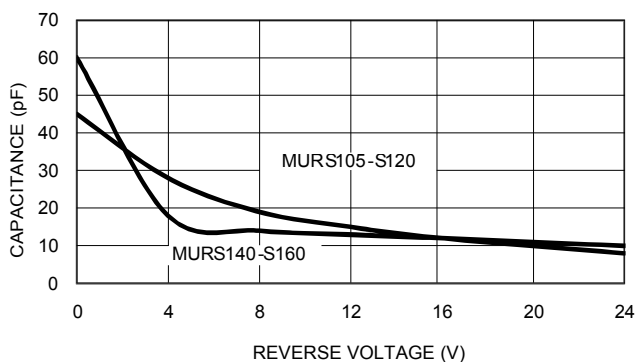
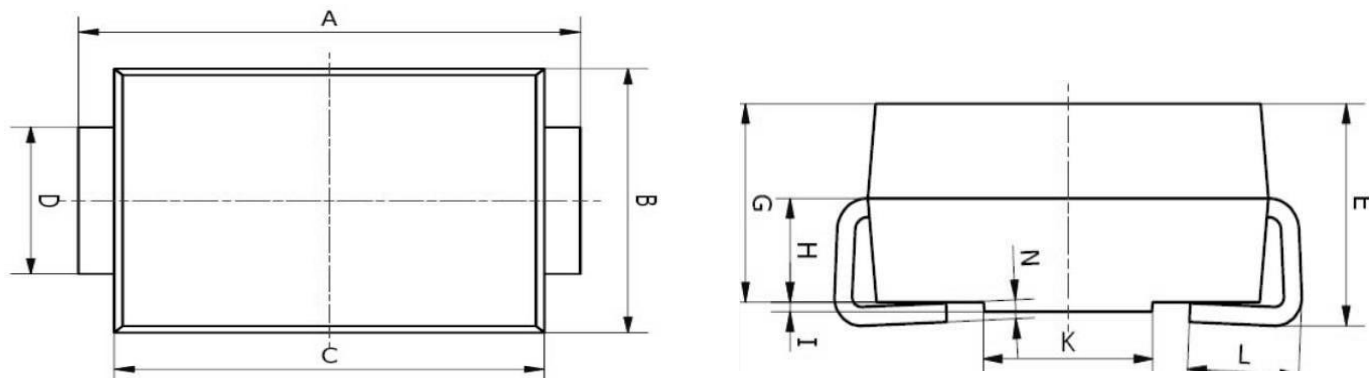
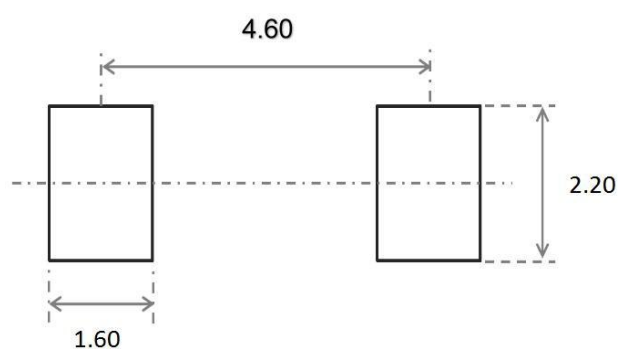


FIG. 7 TYPICAL JUNCTION CAPACITANCE



ULTRA FAST RECOVERY RECTIFIER DIODE
SMB Package Outline Dimensions


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	5.00	5.45	0.197	0.215
B	3.20	4.00	0.126	0.157
C	4.30	4.70	0.169	0.185
D	1.80	2.20	0.071	0.087
E	2.20	2.50	0.087	0.098
G	1.90	2.30	0.075	0.090
H	0.95	1.25	0.037	0.049
I	0.05	0.15	0.002	0.006
K	1.70	2.10	0.067	0.083
L	0.90	1.60	0.035	0.063
N	0.10	0.30	0.004	0.012

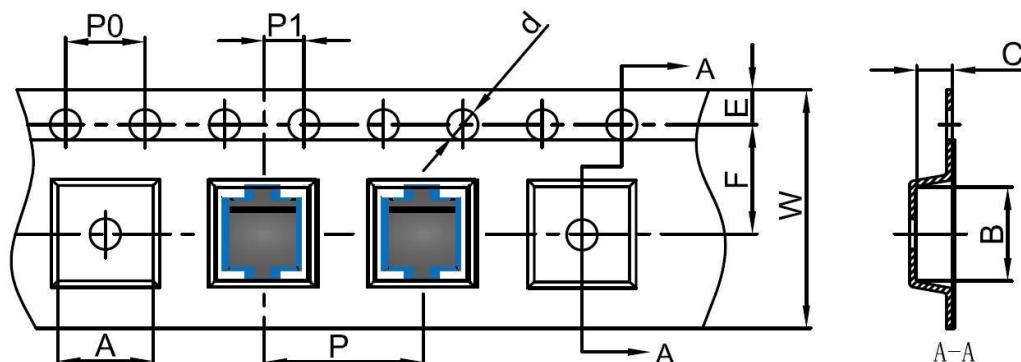
SMB Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

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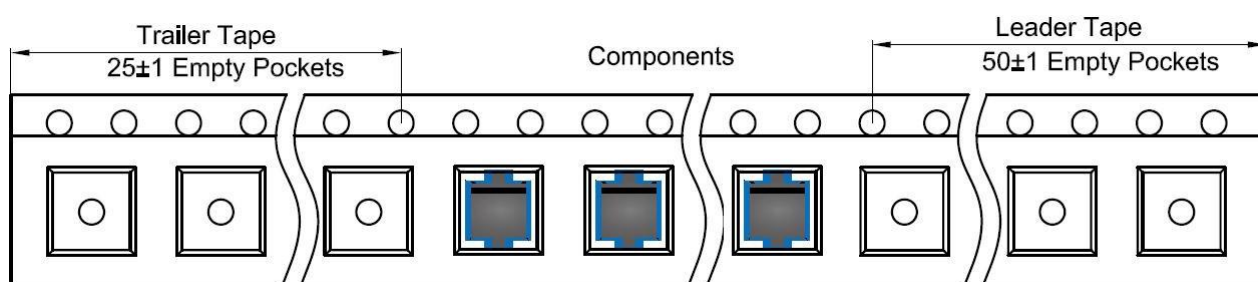
SMB Tape and Reel

SMB Embossed Carrier Tape

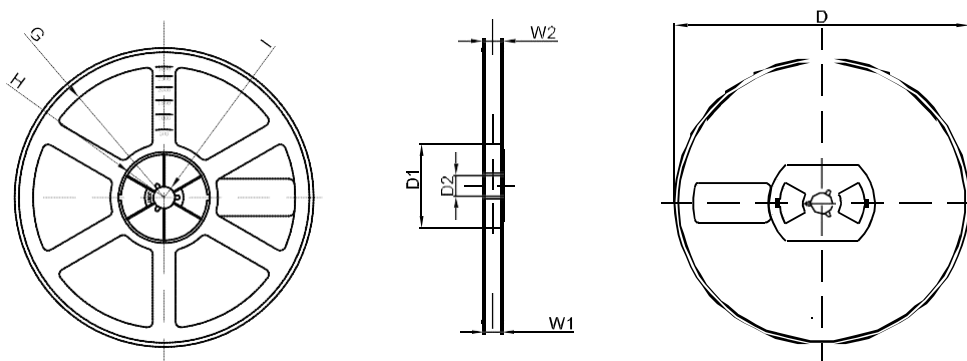


	DIMENSIONS ARE IN MILLIMETER									
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMB	4.10	5.50	2.58	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SMB Tape Leader and Trailer



SMB Reel



	DIMENSIONS ARE IN MILLIMETER							
REEL OPTION	D	D1	D2	G	H	I	W1	W2
13" DIA	Ø330	75.0	13.00	R165	R37.50	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1