RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

MMBD5817A/C/S

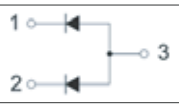
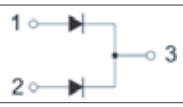
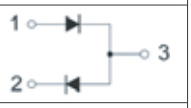
SCHOTTKY BARRIER RECTIFIER

FEATURES

- Low power loss, high efficiency
- High reliability
- High Conductance

SOT-23

MARKING:

MMBD5817A	MMBD5817C	MMBD5817S
		
MARKING:7A	**MARKING:7C**	**MARKING:7S**
		

MAXIMUM RATINGS (@ T_A=25 °C unless otherwise noted)

RATINGS	SYMBOL	MMBD5817A/C/S	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	Volts
Maximum RMS Voltage	V_{RMS}	14	Volts
Maximum DC Blocking Voltage	V_{DC}	20	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at T_L =90°C	I_O	0.4	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	2	Amps
Typical Current Squared Time	I^2T	0.0166	A^2S
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	444	°C/W
Typical Total Capacitance(Note 1)	C_T	120	pF
Operating Temperature Range	T_J	-55 to + 150	°C
Storage Temperature Range	T_{STG}	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS(@T_A=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	MMBD5817A/C/S	UNITS
Maximum Instantaneous Forward Voltage	@I_F =0.1A	V_F	.31	Volts
	@I_F =0.5A		.43	
Maximum Average Reverse Current	@T_A = 25°C	I_R	250	uAmps
at Rated DC Blocking Voltage	@T_A = 150°C		10	mAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. "ROHS compliant".
3. Thermal Resistance : At 9.5mm lead lengths, PCB mounted.

2019-01/43
REV:O

RATING AND CHARACTERISTICS CURVES (MMBD5817A/C/S)

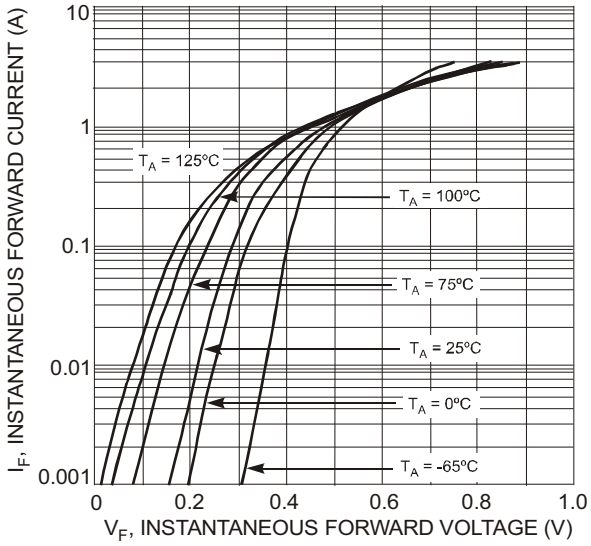


Fig. 1 Typical Forward Characteristics, Per Element

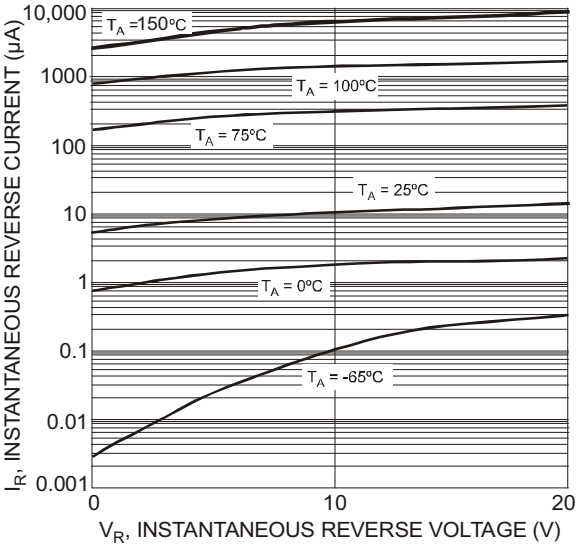


Fig. 2 Typical Reverse Characteristics, Per Element

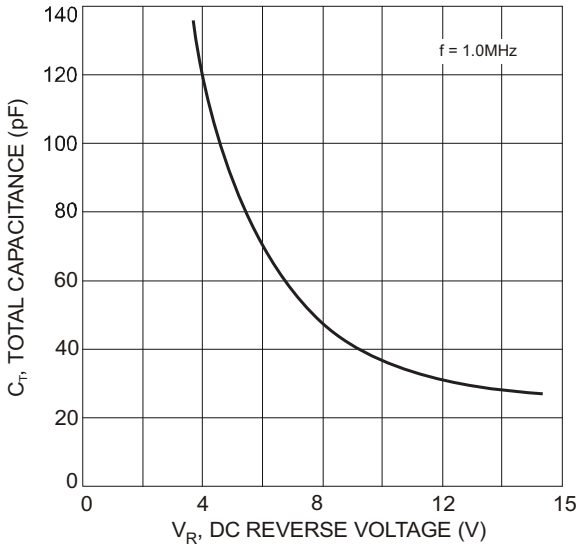


Fig. 3 Total Capacitance vs. Reverse Voltage, Per Element

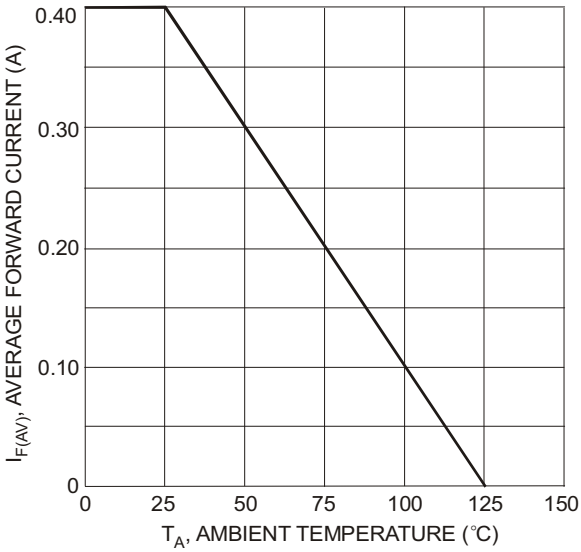
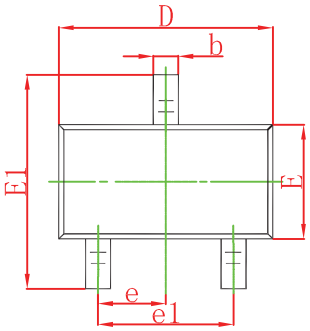
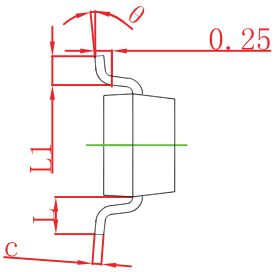
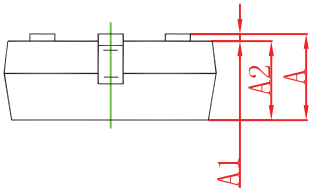


Fig. 4 Forward Current Derating Curve, Per Element

SOT-23 Package Outline Dimensions

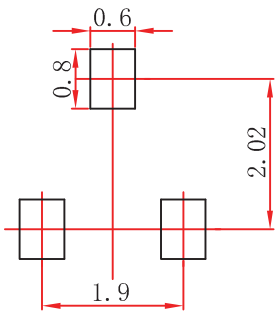






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

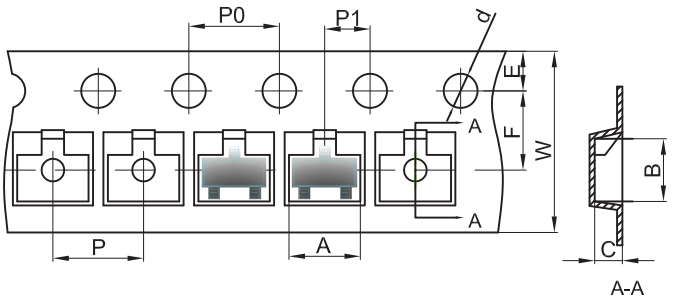
SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

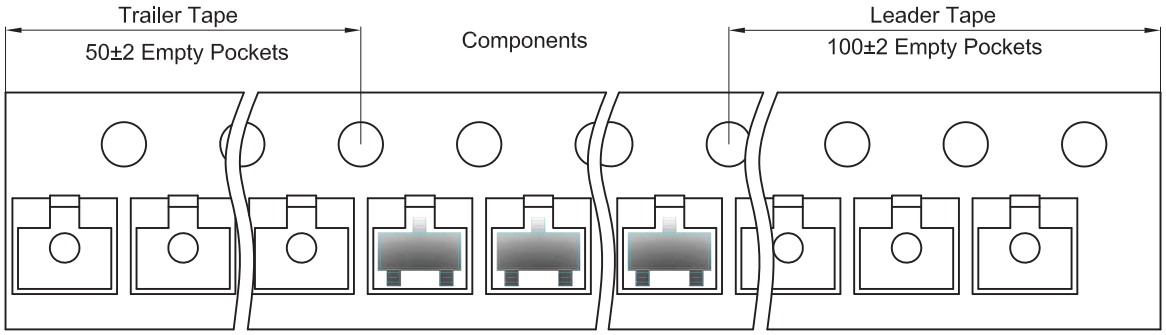


Packaging Description:

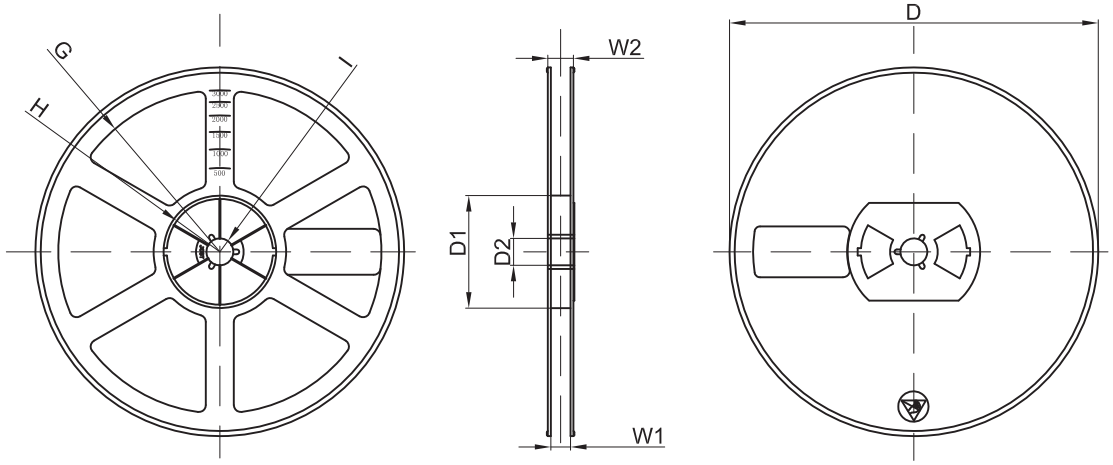
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	

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