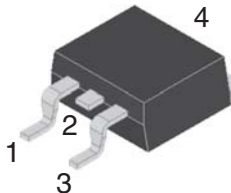
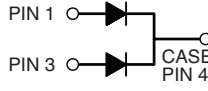



10.0 Amp. Surface Mount Schottky Barrier Rectifiers

<p>TO-263AB (D2PAK)</p>  	Voltage 45 to 150 V	Current 10.0 A	
	FEATURES <ul style="list-style-type: none"> • Low leakage current • Ideal for automated placement • Guardring for overvoltage protection • Low power losses, high efficiency • Low forward voltage drop • High frequency operation • High forward surge current capability • Solder dip 260°C, 10s • AEC-Q101 qualified • Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC • Meets MSL level 1, per J-STD-020, LF maximum peak of 260° C 		
	MECHANICAL DATA <ul style="list-style-type: none"> • Case: TO-263AB (D2PAK) molded plastic. Epoxy meets UL 94V-0 flammability rating. • Polarity: As marked • Terminals: Matte tin plated leads, solderable per MIL-STD-750 Method 2026, J-STD-002 and JESD22-B102. Consumer grade, meets JESD 201 class 1A whisker test. 		
	TYPICAL APPLICATIONS Used in low voltage, high frequency rectifier of switching mode power supplies, freewheeling diodes, dc-to-dc converters or polarity protection application.		

Maximum Ratings and Electrical Characteristics at 25°C

		MBRS 1045CTC	MBRS 1060CTC	MBRS 10100CTC	MBRS 10150CTC
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	45	60	100	150
V_{RMS}	Maximum RMS Voltage (V)	31	42	70	105
V_{DC}	Maximum DC Blocking Voltage (V)	45	60	100	150
$I_{F(AV)}$	Maximum Average Forward Rectified Current at $T_C=125^\circ\text{C}$	10 A			
I_{FSM}	Peak Forward Surge Current, 8.3 ms Single Half sine-wave Superimposed on Rated Load (JEDEC Method)	120 A			
I_{RRM}	Peak Repetitive Reverse Surge Current	0.5 A			
T_j	Operating Junction Temperature Range	- 65 to + 150 °C			
T_{stg}	Storage Temperature Range	- 65 to + 175 °C			

Electrical Characteristics at Tamb = 25 °C

V_F	$I_F = 5\text{ A}, T_j = 25^\circ\text{C}$	0.70 V	0.80 V	0.85 V	0.88 V
	$I_F = 5\text{ A}, T_j = 125^\circ\text{C}$	0.57 V	0.65 V	0.75 V	0.78 V
	$I_F = 10\text{ A}, T_j = 25^\circ\text{C}$	0.80 V	0.90 V	0.95 V	0.98 V
	$I_F = 10\text{ A}, T_j = 125^\circ\text{C}$	0.67 V	0.75 V	0.85 V	0.88 V
I_R	Max. Instantaneous Reverse Current @ $T_j=25^\circ\text{C}$ at Rated DC Blocking Voltage (Note 3) @ $T_j=125^\circ\text{C}$	0.10 mA			
		15 mA	10 mA	5.0 mA	
R_{thj-c}	Typical Thermal Resistance (Note 2)	2.0 °C/W			

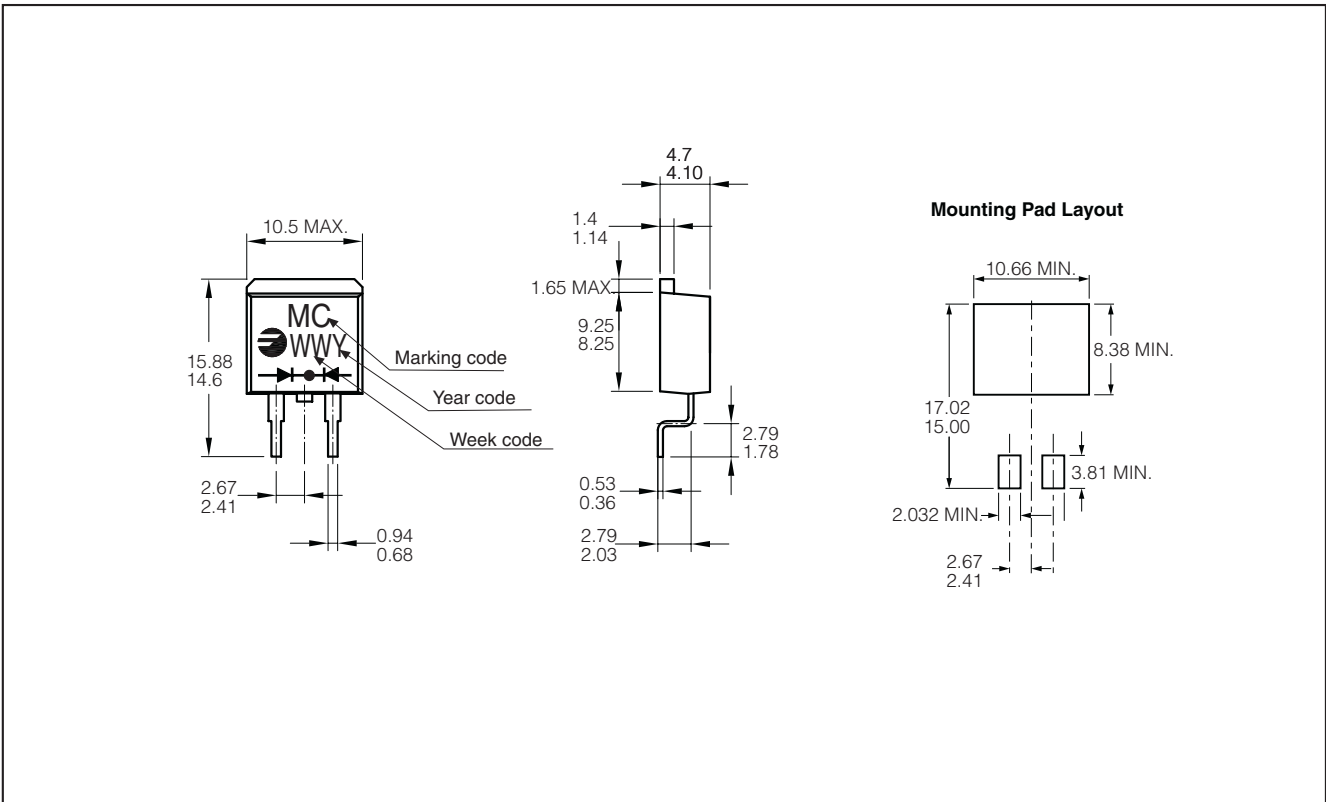
Notes: 1. Pulse Test: 300µ Pulse Width, 1% Duty Cycle
 2. Thermal Resistance from Junction to Case per diode
 3. Pulse test: Pulse width ≤ 40ms

10.0 Amp. Surface Mount Schottky Barrier Rectifiers

Ordering information

PREFERRED P/N	PACKAGE CODE	DELIVERY MODE	BASE QUANTITY	UNIT WEIGHT (g)
MBRS10150CTC 00TRC	TR	13" diameter tape and reel	800	1.33
MBRS10150CTC 00TUC	TU	TUBE	1000	1.33

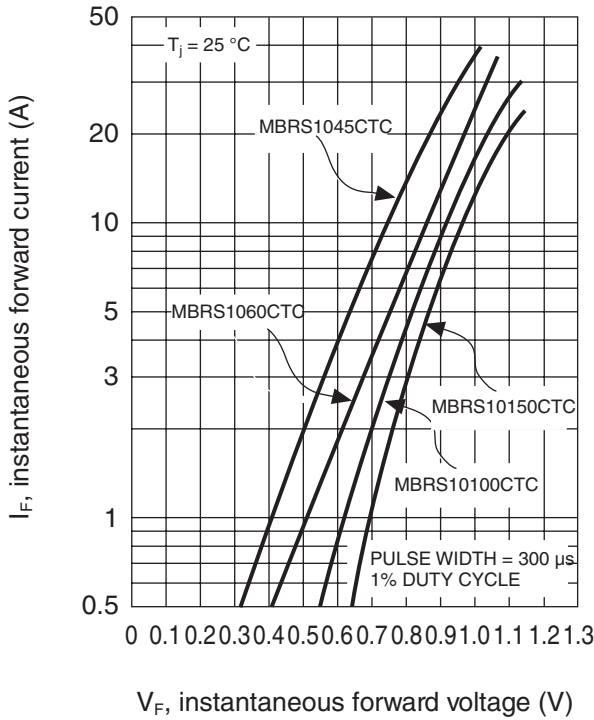
Package Outline Dimensions: (mm) TO-263AB (D2PAK)



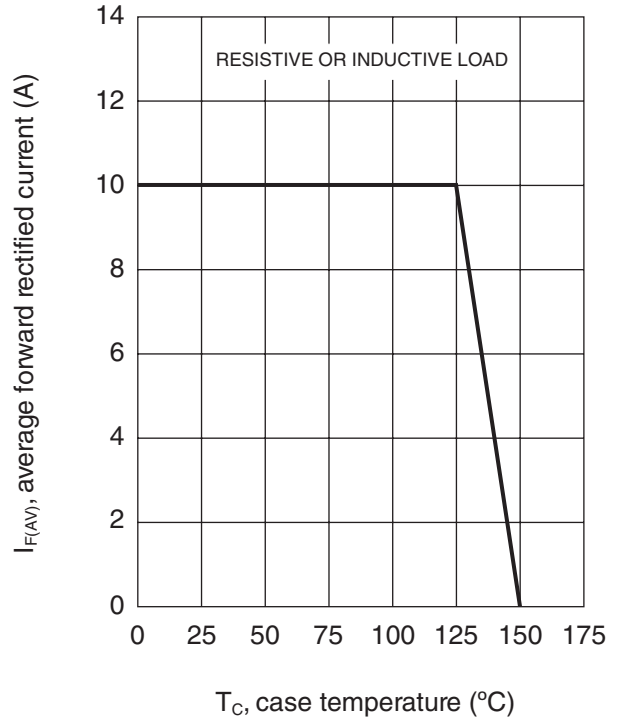
10.0 Amp. Surface Mount Schottky Barrier Rectifiers

Ratings and Characteristics (Ta 25 °C unless otherwise noted)

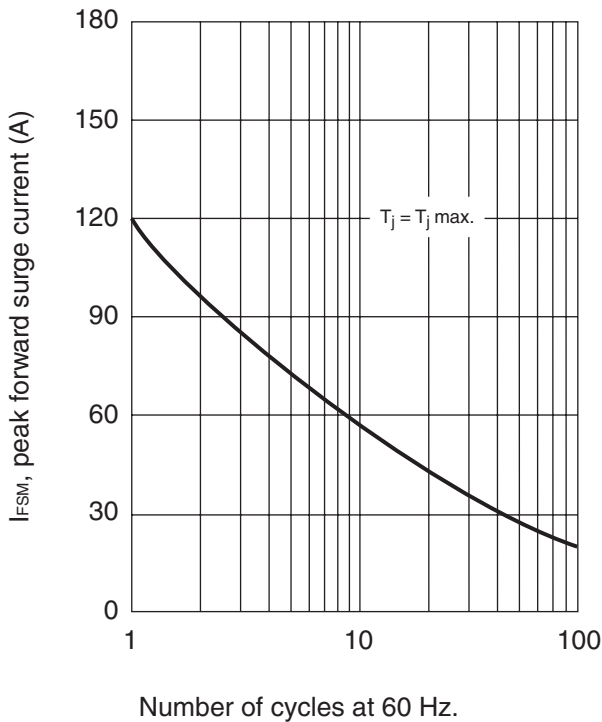
TYPICAL FORWARD CHARACTERISTIC



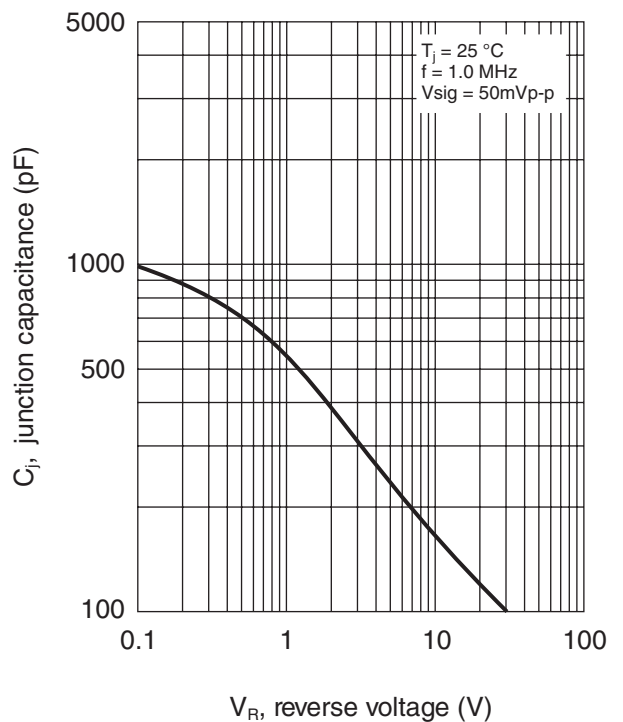
FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



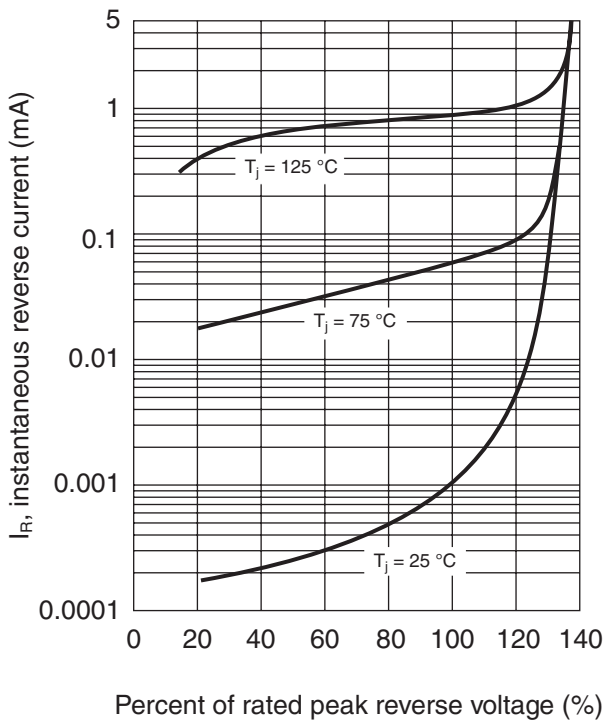
TYPICAL JUNCTION CAPACITANCE



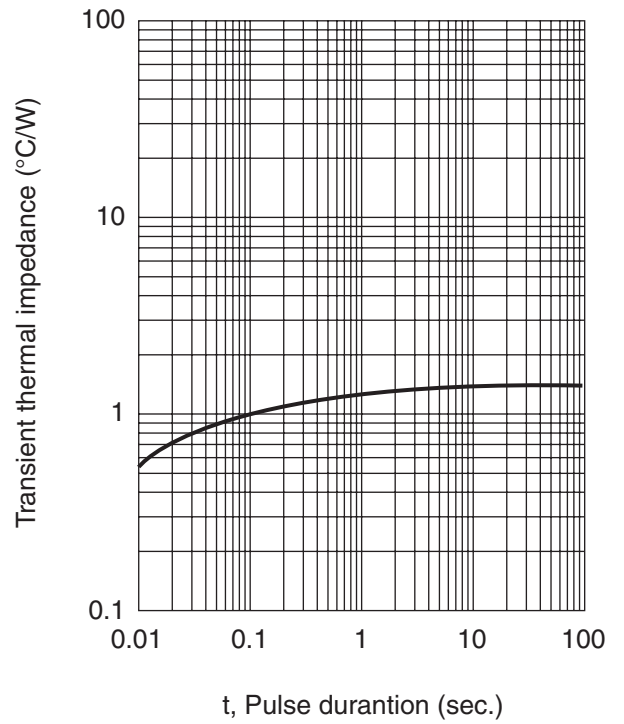
10.0 Amp. Surface Mount Schottky Barrier Rectifiers

Ratings and Characteristics (Ta 25 °C unless otherwise noted)

TYPICAL REVERSE CHARACTERISTIC



TYPICAL TRANSIENT THERMAL CHARACTERISTIC



10.0 Amp. Surface Mount Schottky Barrier Rectifiers

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