

Features

- Electrical insulation between chip and mounting base, 2500V AC insulation
- Excellent temperature characteristics and power cycling capability
- Space-saving and lightweight design

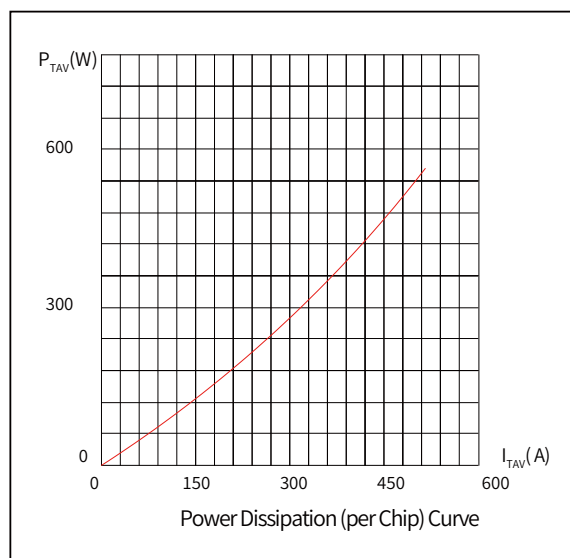
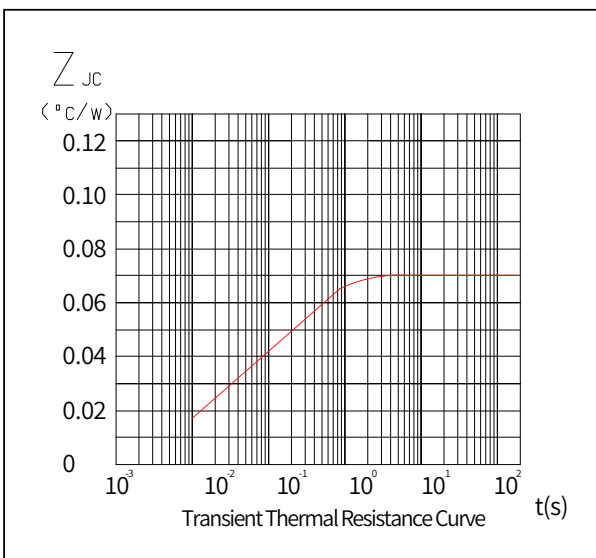
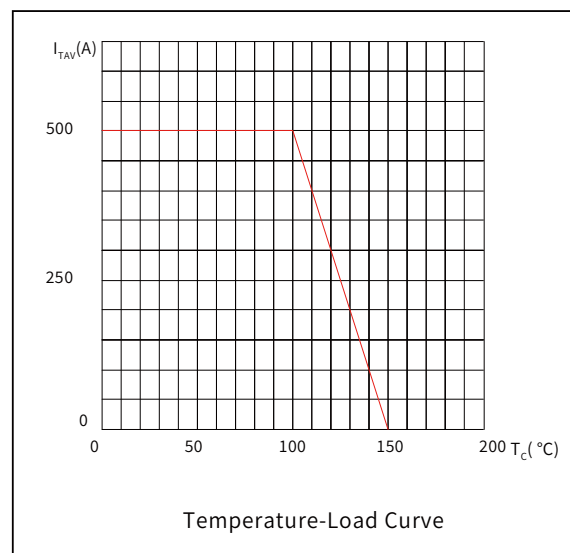
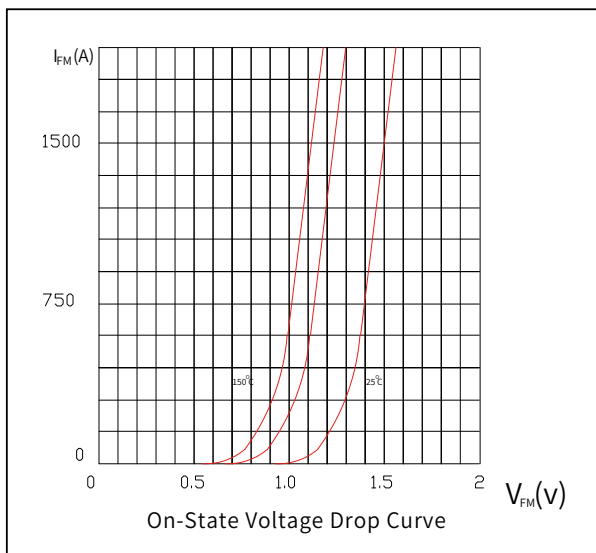
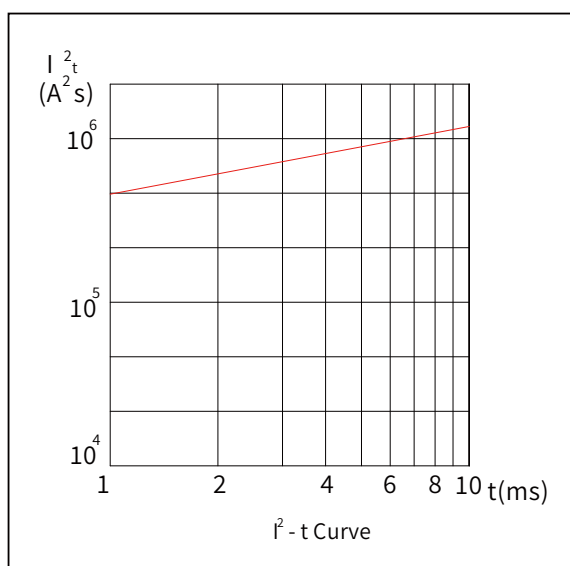
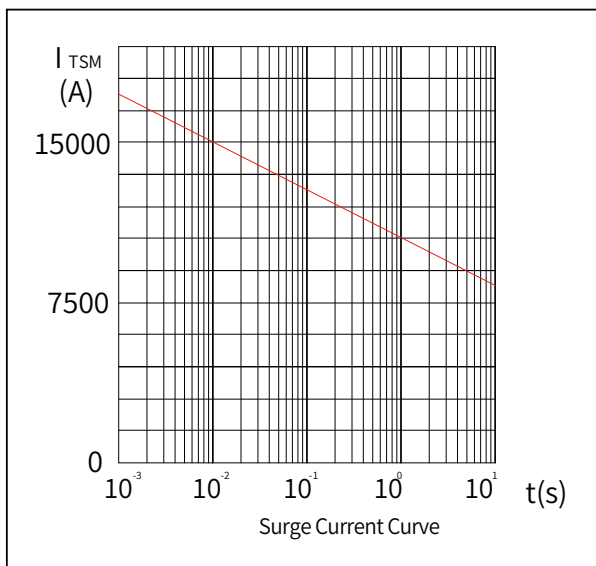
Typical Applications

- AC/DC motor control
- Various rectifier power supplies
- Frequency converters



$V_{RSM}(V)$	$V_{RRM}(V)$	Model
1300	1200	MDC500B-12
1700	1600	MDC500B-16
1900	1800	MDC500B-18
2100	2000	MDC500B-20
2500	2400	MDC500B-24

Parameter	Characteristic	Test Conditions	$T_j(^{\circ}C)$	Value			Unit
				Min	Typ	Max	
$I_{F(AV)}$	Mean Forward Current	180° sine halfwave, 50Hz, singleside cooling, $T_c=100^{\circ}C$	150			500	A
I_{FSM}	Non-repetitive Surge (On-state) Current	10ms, sine halfwave, $V_R=0.6V_{RRM}$	150			15	kA
I_t^2						1125	$A^2s \cdot 10^3$
I_{RRM}	Repetitive Peak Reverse Current	At V_{RRM}	150			7	mA
V_{FO}	Threshold Voltage		150			0.75	V
r_F	Slope Resistance		150			0.36	mΩ
V_{FM}	Peak Forward Voltage	$I_{FM}=1500A$	25		1.25	1.5	V
V_{iso}	Insulation Voltage	AC, 50Hz, R.M.S, 1min		2500			V
$R_{th(j-c)}$	Junction to Case Thermal Resistance	Singleside cooling, single die				0.07	$^{\circ}C/W$
$R_{th(c-h)}$	Case to Sink Thermal Resistance	Singleside cooling, single module				0.03	$^{\circ}C/W$
M_t	Terminal Mounting Torque			10		12	$N \cdot m$
M_s	Base Plate Mounting Torque			4		6	$N \cdot m$
T_{stg}	Storage Temperature			-40		150	$^{\circ}C$



Outline Package Dimensions

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