SBDD1045CT SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

I_O	10（2×5）A
V_{RRM}	45 V
T_j	150 ℃
$V_{F(typ)}$	0.48V （@Tj=125℃）

TO-252

1.ANODE
2.CATHODE
3.ANODE

FEATURES

- Low Power Loss,High Efficiency
- Guard Ring Die Construction for Transient Protection
- High Current Capability and Low Forward Voltage Drop

MAXIMUM RATINGS (T_c=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	45	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	31.5	V
I_O	Average rectified output current	10	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	120	A
$R_{\Theta JC}$	Thermal resistance from junction to case	5.0	℃/W
$R_{\Theta JA}$	Thermal resistance from junction to ambient	100	℃/W
T_j	Junction temperature	150	℃
T_{stg}	Storage temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_c=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	I_R=0.1mA		45			V
Reverse current	I_R	V_R=45V	Tj =25℃		20	100	uA
			Tj =125℃		20		mA
Forward voltage	V_F	I_F=3A	Tj =25℃		0.46		V
			Tj =125℃		0.40		V
		I_F=5A	Tj =25℃		0.52	0.60	V
			Tj =125℃		0.48		V

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

FIG.1: FORWARD CURRENT DERATING CURVE

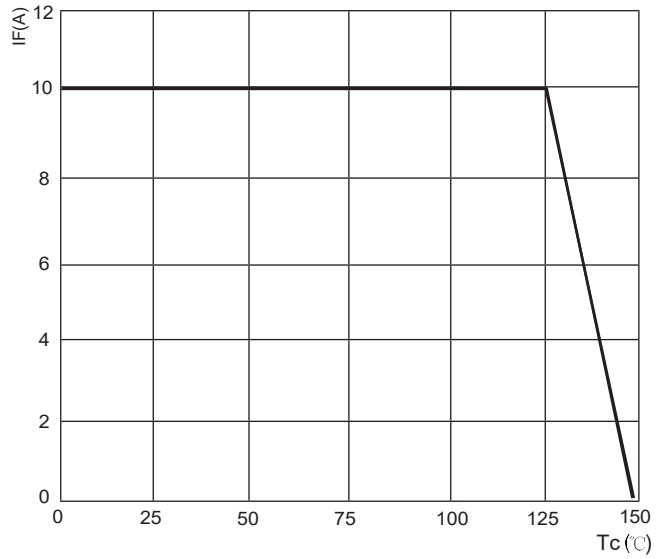

FIG.2: TYPICAL FORWARD CHARACTERISTICS

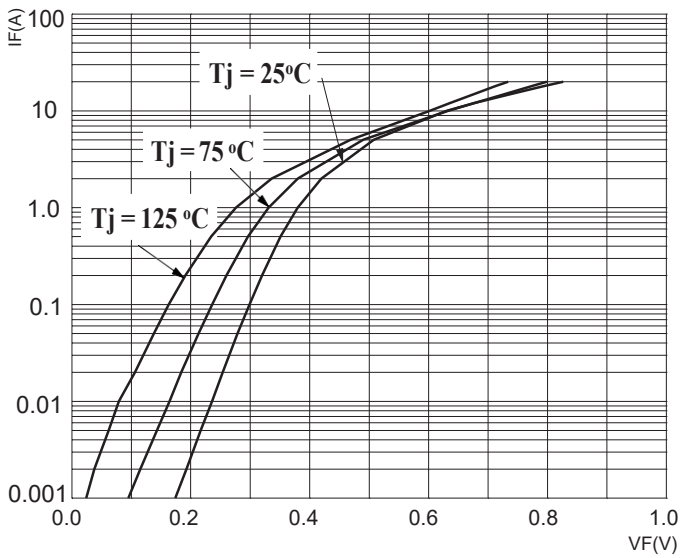

FIG.3: TOTAL CAPACITANCE DERATING CURVE

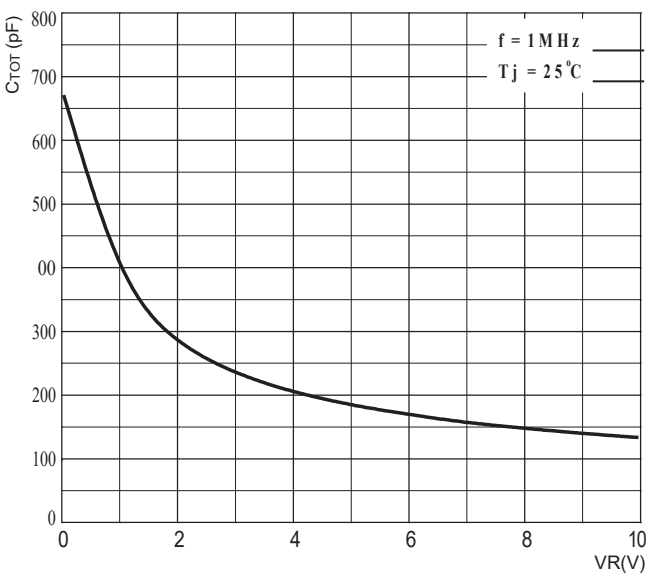

FIG.4: TYPICAL REVERSE CHARACTERISTICS