

SBD40150TCTB、SBDF40150TCTB

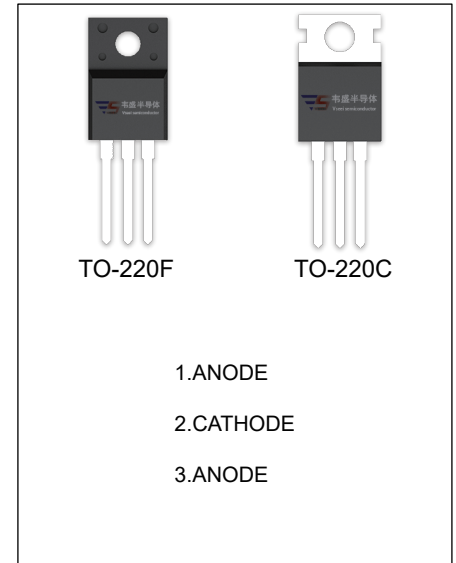
SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

I_O	40 (2×20) A
V_{RRM}	150 V
T_j	150 °C
$V_{F(typ)}$	0.69V (@T_j=125°C)

FEATURES

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



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	SBD		Unit
		40150TCTB	F40150TCTB	
V_{RRM}	Peak repetitive reverse voltage	150		V
V_{RWM}	Working peak reverse voltage			
V_R	DC blocking voltage			
$V_{R(RMS)}$	RMS reverse voltage	105		V
I_O	Average rectified output current	40		A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	250		A
$R_{\theta Jc}$	Thermal resistance from junction to case ,T _c =25°C	2.0	3.0	°C/W
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5		°C/W
T_j	Junction temperature	150		°C
T_{stg}	Storage temperature	-55~+150		°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=0.1mA$	150			V
Reverse current	I_R	$V_R=150V$	$T_j=25^\circ C$	5	100	uA
			$T_j=125^\circ C$	5		mA
Forward voltage	V_F	$I_F=10A$	$T_j=25^\circ C$	0.73		V
			$T_j=125^\circ C$	0.58		V
		$I_F=20A$	$T_j=25^\circ C$	1.01	1.1	V
			$T_j=125^\circ C$	0.69		V

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

FIG.1: FORWARD CURRENT DERATING CURVE

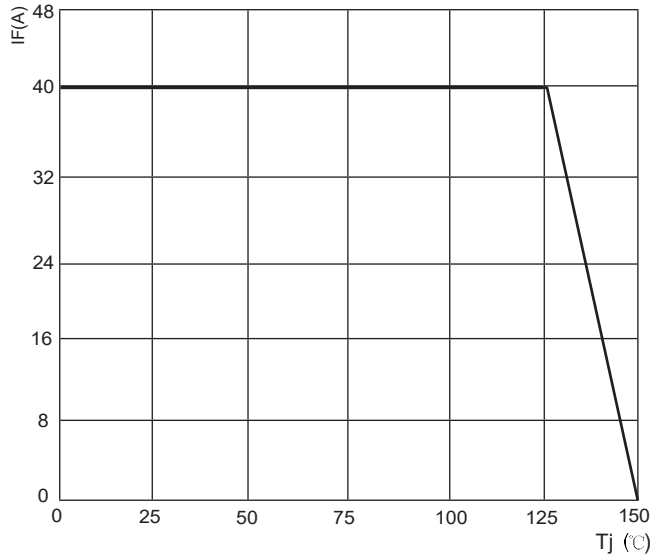


FIG.2: TYPICAL FORWARD CHARACTERISTICS

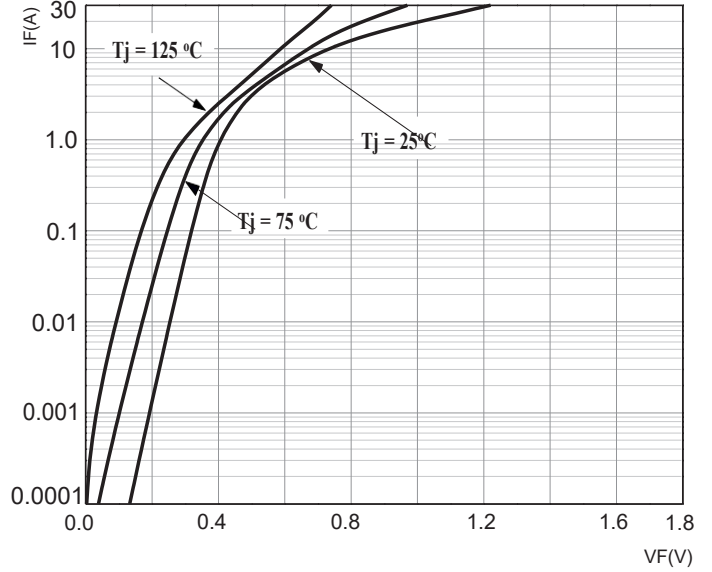


FIG.3: TOTAL CAPACITANCE DERATING CURVE

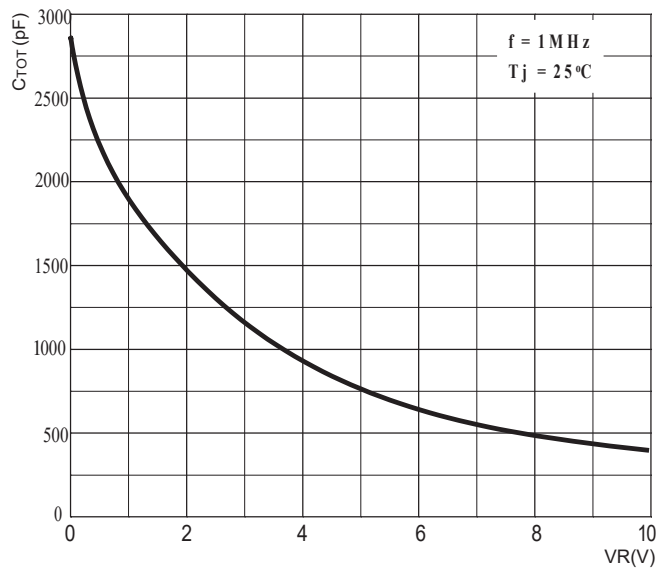


FIG.4: TYPICAL REVERSE CHARACTERISTICS

