

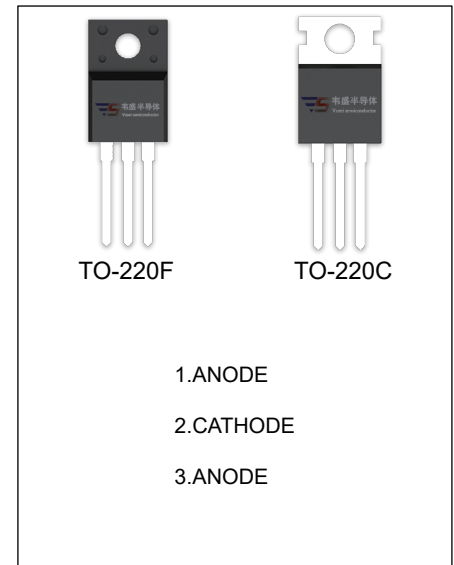
SBD4045LCTB、SBDF4045LCTB SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

I_O	40 (2×20) A
V_{RRM}	45 V
T_j	150 °C
$V_{F(typ)}$	0.50V (@ $T_j=125^{\circ}C$)

FEATURES

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



MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	SBD		Unit
		4045LCTB	F4045LCTB	
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	40		A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	200		A
$R_{\theta Jc}$	Thermal resistance from junction to case , $T_c=25^{\circ}C$	2.0	3.0	$^{\circ}C/W$
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5		$^{\circ}C/W$
T_j	Junction temperature	150		$^{\circ}C$
T_{stg}	Storage temperature	-55~+150		$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1mA$	45			V
Reverse current	I_R	$V_R=45V$	$T_j=25^{\circ}C$	80	150	μA
			$T_j=125^{\circ}C$	30		mA
Forward voltage	V_F	$I_F=10A$	$T_j=25^{\circ}C$	0.44		V
			$T_j=125^{\circ}C$	0.38		V
		$I_F=20A$	$T_j=25^{\circ}C$	0.53	0.58	V
			$T_j=125^{\circ}C$	0.50		V

*Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$.

FIG.1: FORWARD CURRENT DERATING CURVE

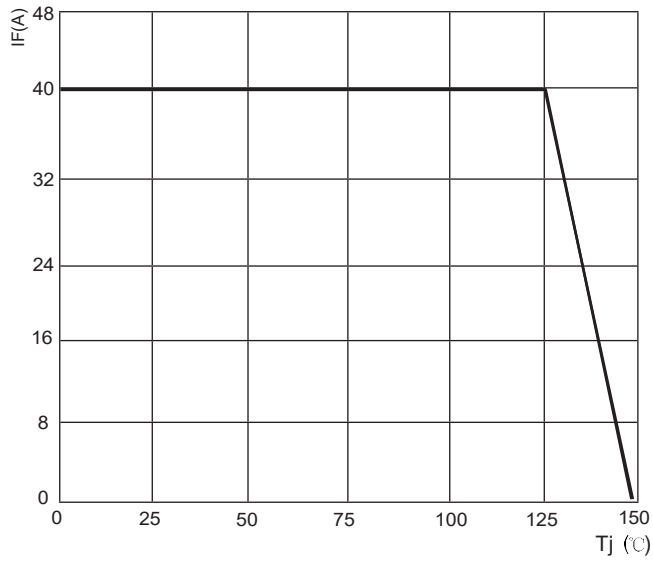


FIG.2: TYPICAL FORWARD CHARACTERISTICS

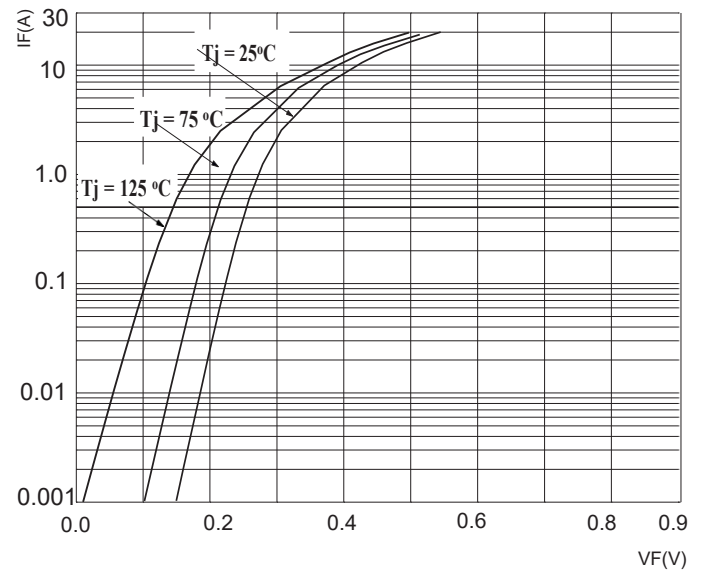


FIG.3: TOTAL CAPACITANCE DERATING CURVE

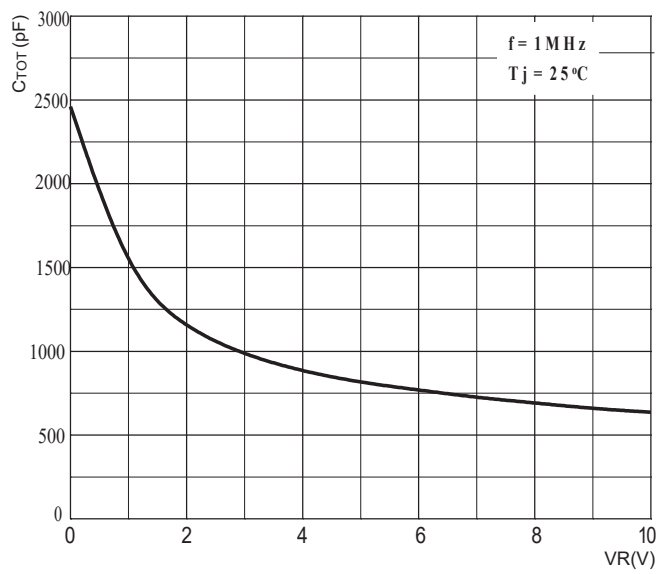


FIG.4: TYPICAL REVERSE CHARACTERISTICS

