

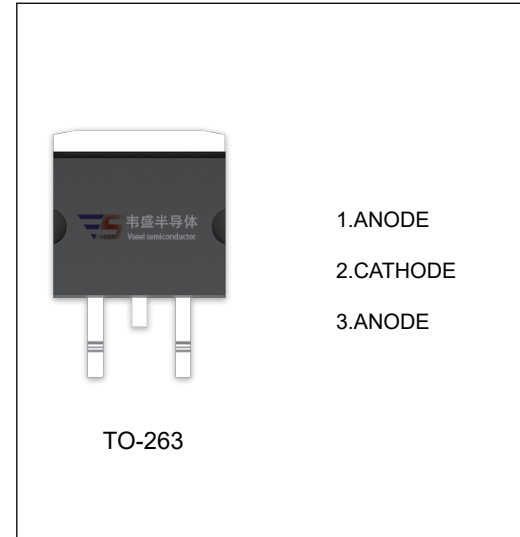
SBDB3045LCTB SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

I_O	30 (2×15) A
V_{RRM}	45 V
T_j	150 °C
$V_{F(typ)}$	0.47V (@Ta=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 ($T_a=25^{\circ}\text{C}$ 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	30	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 , $T_c=25^{\circ}\text{C}$	2.0	$^{\circ}\text{C/W}$
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5	$^{\circ}\text{C/W}$
T_j	Junction temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-55~+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	45			V
Reverse current	I_R	$V_R=45\text{V}$	$T_j=25^{\circ}\text{C}$	80	120	μA
			$T_j=125^{\circ}\text{C}$	50		mA
Forward voltage	V_F	$I_F=10\text{A}$	$T_j=25^{\circ}\text{C}$	0.47		V
			$T_j=125^{\circ}\text{C}$	0.40		V
		$I_F=15\text{A}$	$T_j=25^{\circ}\text{C}$	0.52	0.55	V
			$T_j=125^{\circ}\text{C}$	0.47		V

*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2.0\%$.

FIG.1: FORWARD CURRENT DERATING CURVE

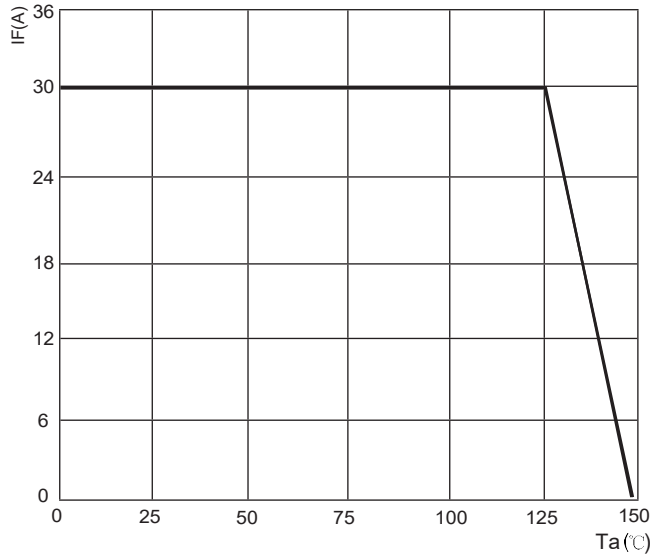


FIG.2: TYPICAL FORWARD CHARACTERISTICS

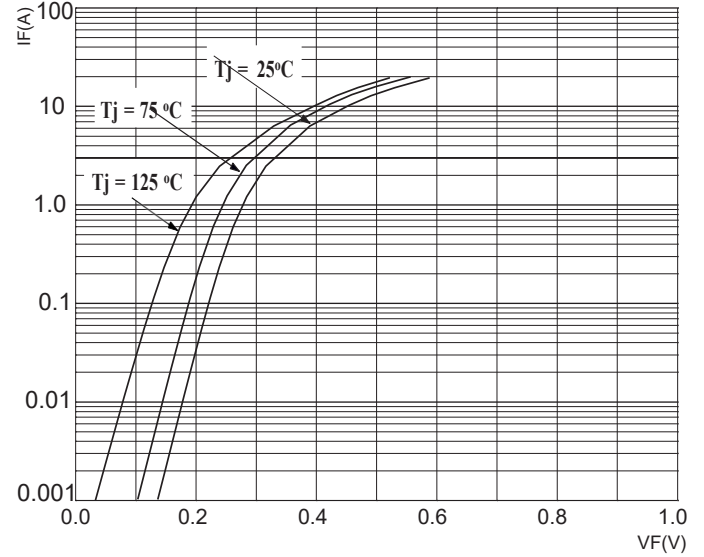


FIG.3: TOTAL CAPACITANCE DERATING CURVE

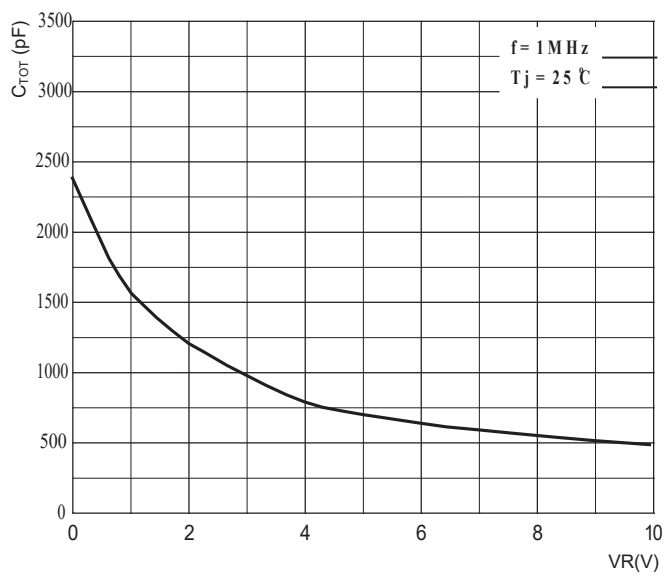


FIG.4: TYPICAL REVERSE CHARACTERISTICS

