

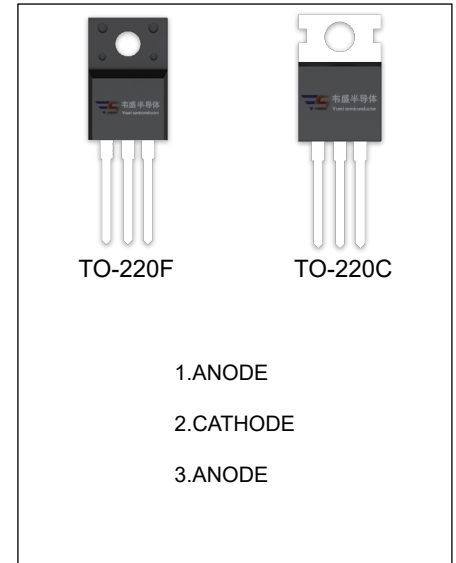
# **SBD30150TA、SBDF30150TA** SCHOTTKY BARRIER RECTIFIER

## **MAIN CHARACTERISTICS**

$I_O$	<b>30A</b>
$V_{RRM}$	<b>150 V</b>
$T_j$	<b>150°C</b>
$V_{F(typ)}$	<b>0.76V (@Tj=125°C)</b>

## **FEATURES**

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



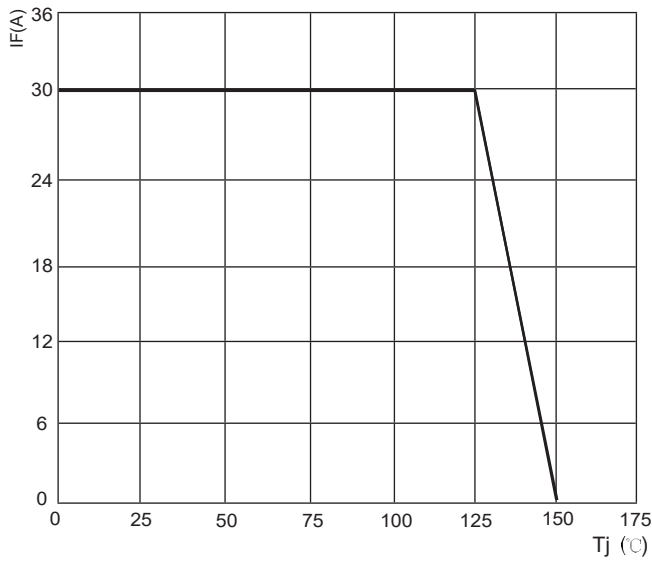
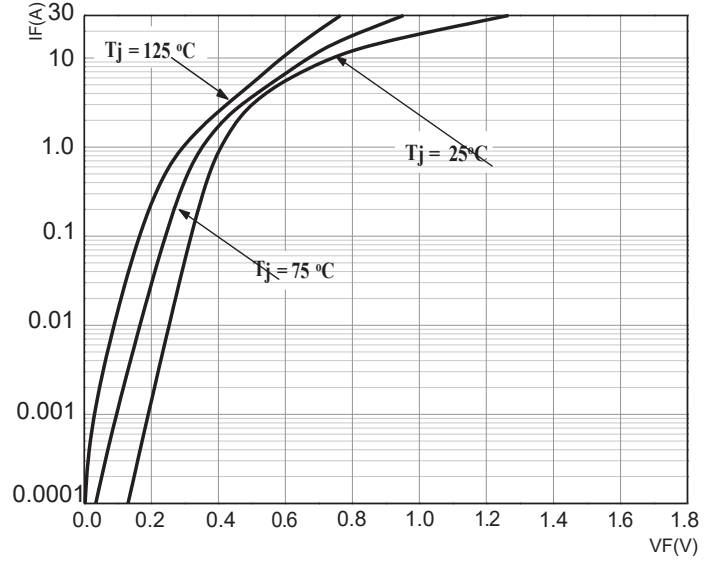
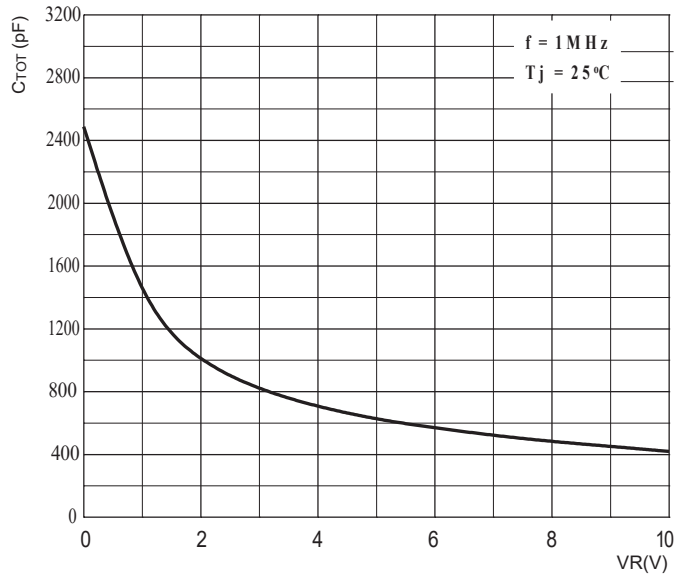
## **MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )**

Symbol	Parameter	SBD		Unit
		30150TA	F30150TA	
$V_{RRM}$	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	30		A
$I_{FSM}$	Non-Repetitive peak forward surge current (8.3ms half sine wave)	300		A
$R_{\theta Jc}$	Thermal resistance from junction to case , $T_c=25^{\circ}\text{C}$	2.0	3.0	$^{\circ}\text{C}/\text{W}$
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5		$^{\circ}\text{C}/\text{W}$
$T_j$	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	$V_{(BR)}$	$I_R=0.1\text{mA}$	150			V
Reverse current	$I_R$	$V_R=150\text{V}$	$T_j=25^{\circ}\text{C}$	10.0	30	$\mu\text{A}$
			$T_j=125^{\circ}\text{C}$	10.0		mA
Forward voltage	$V_F$	$I_F=15\text{A}$	$T_j=25^{\circ}\text{C}$	0.87		V
			$T_j=125^{\circ}\text{C}$	0.64		V
		$I_F=30\text{A}$	$T_j=25^{\circ}\text{C}$	1.25	1.30	V
			$T_j=125^{\circ}\text{C}$	0.76		V

\*Pulse test: pulse width  $\leq 300\mu\text{s}$ , 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**
