



SBT3050LYT~SBT3050LFYT

EXTREME LOW VF SCHOTTKY RECTIFIER

Voltage

50 V

Current

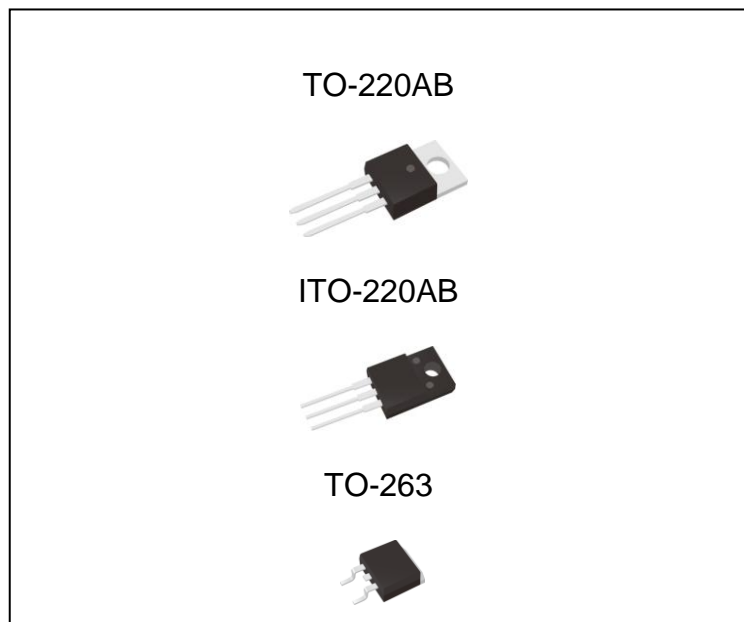
30 A

Features

- Ultra low forward voltage, Low Power loss
- Surface mount package
- Ultra thin profile package for space constrained utilization
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

Mechanical Data

- Case: Molded plastic, TO-220AB, ITO-220AB, TO-263
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- TO-220AB Weight: 0.067 ounces, 1.89 grams.
- ITO-220AB Weight: 0.056 ounces, 1.6 grams
- TO-263 Weight: 0.051 ounces, 1.46 grams



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	V
Maximum rms voltage	V_{RMS}	35	V
Maximum dc blocking voltage	V_R	50	V
Maximum average forward rectified current	$I_{F(AV)}$	30	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200	A
Typical junction capacitance ($V_R=4V$, $f=1\text{MHz}$)	C_J	2400	pF
Typical thermal resistance (Note 1)	TO-220AB	2	$^\circ\text{C/W}$
	TO-263	2	
	ITO-220AB	5	
Operating junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	TYP.	MAX.	UNIT
Forward voltage	V_F	$I_F = 1A$	0.33	-	V
		$I_F = 7.5A$			
		$I_F = 15A$			
		$I_F = 30A$			
		$I_F = 1A$	0.19	-	
		$I_F = 7.5A$			
$I_F = 15A$					
Reverse current (Note 2)	I_R	$V_R = 40V$	17	-	μA
		$V_R = 50V$	-	50	μA
			20	-	mA

Note : 1. Mounted on infinite heatsink.

2. Short duration pulse test used to minimize self-heating effect.



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TYPICAL CHARACTERISTIC CURVES

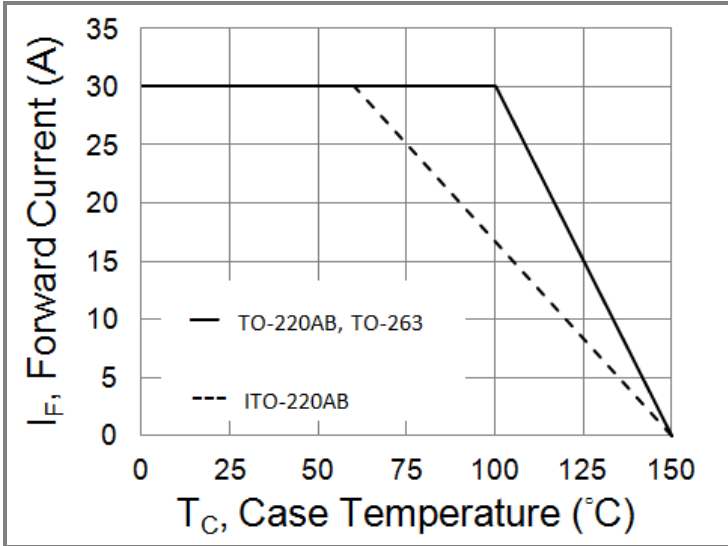


Fig.1 Forward Current Derating Curve

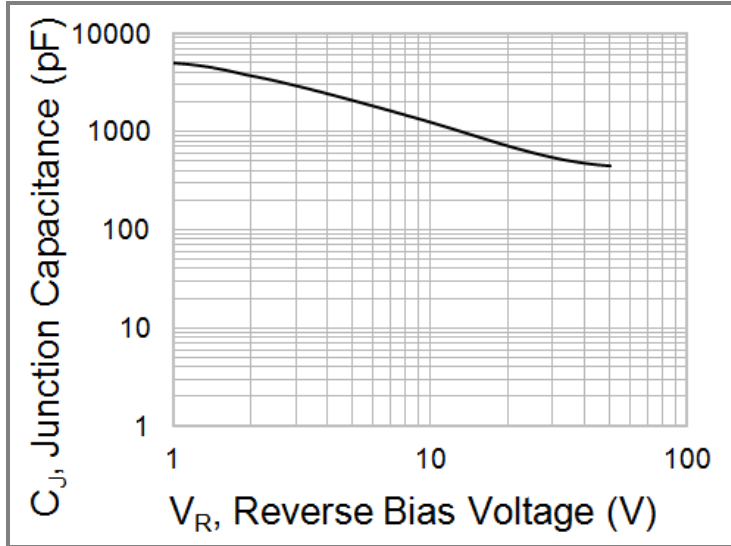


Fig. 2 Typical Junction Capacitance

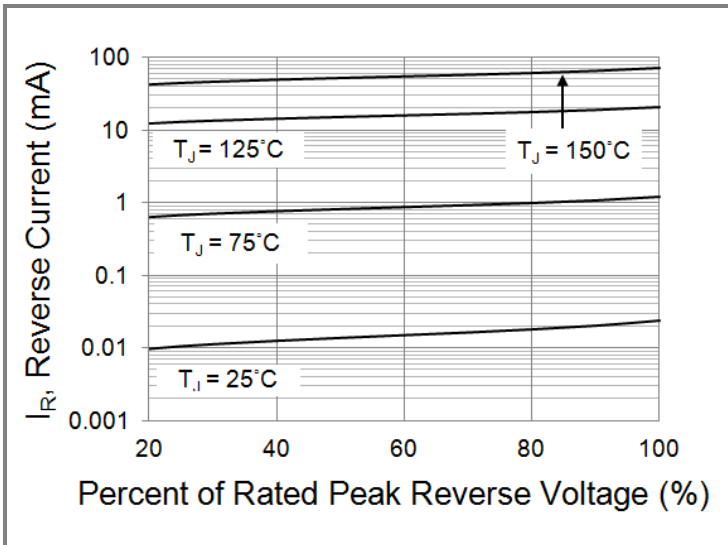


Fig.3 Typical Reverse Characteristics

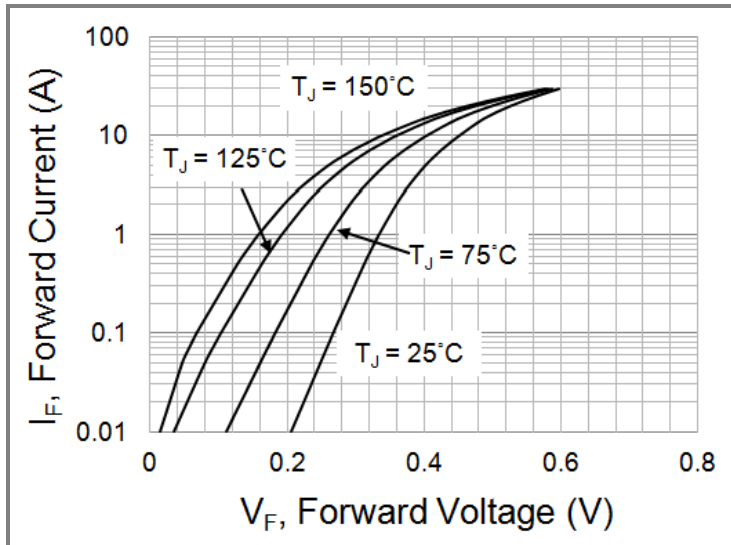


Fig.4 Typical Forward Characteristics

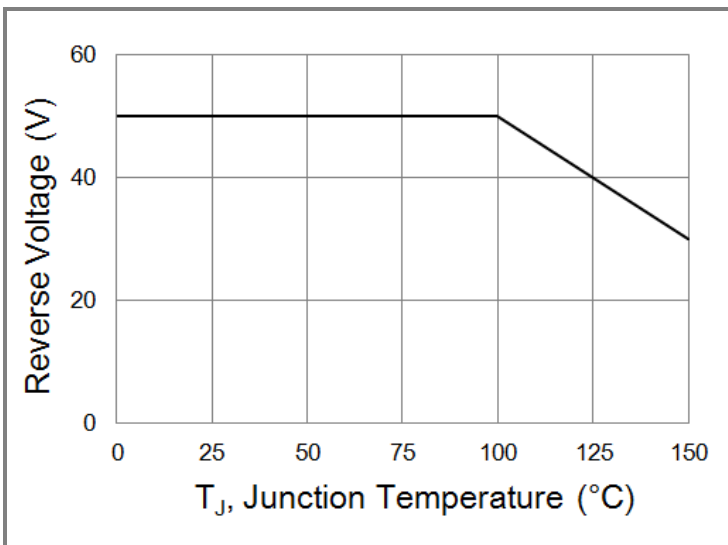
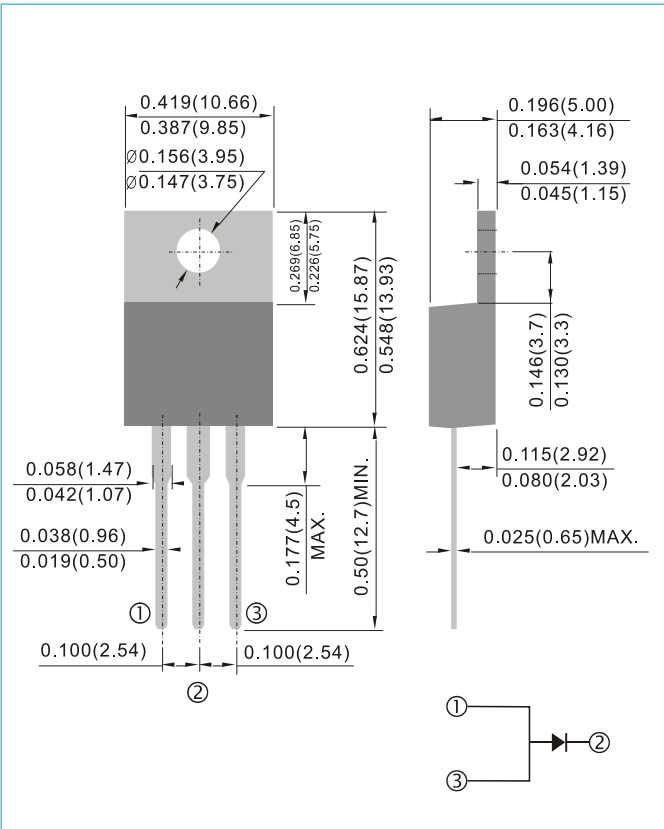


Fig.5 Operating Temperature Derating Curve

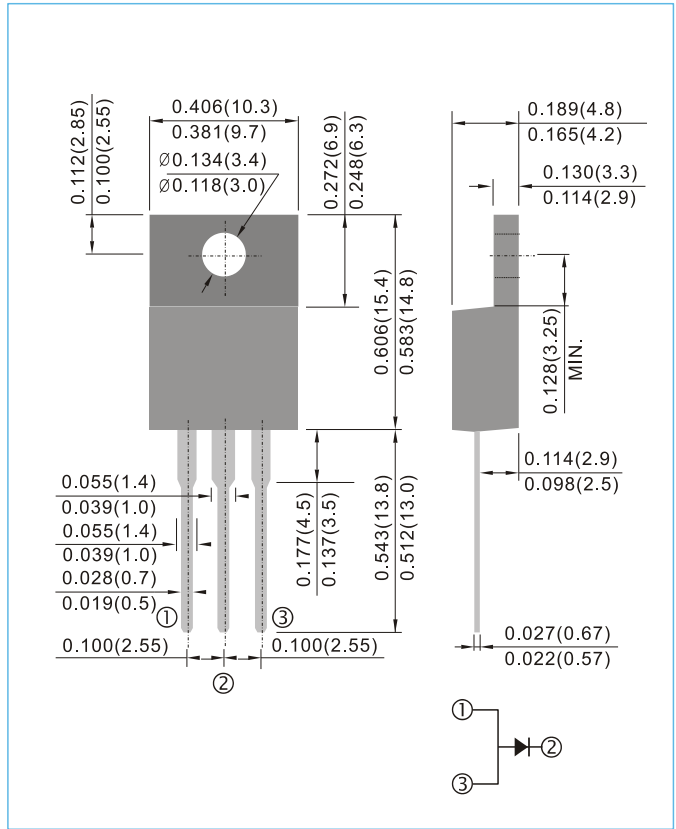


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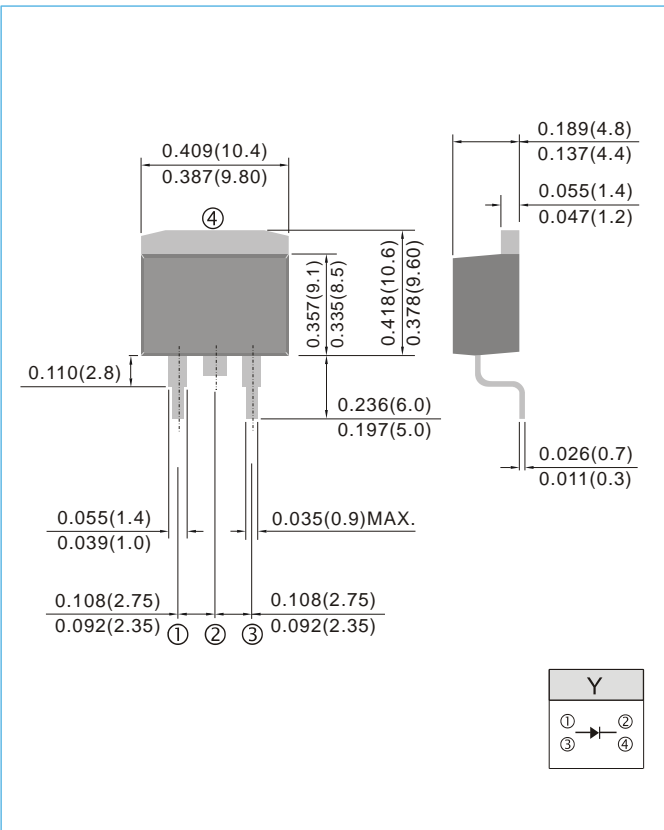
TO-220AB Unit : inch(mm)



ITO-220AB Unit : inch(mm)



TO-263 / D²PAK Unit : inch(mm)





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Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SBT3050LYT_T0_00001	TO-220AB	50pcs / Tube	SBT3050LYT	Halogen free
SBT3050LFYT_T0_00001	ITO-220AB	50pcs / Tube	SBT3050LFYT	Halogen free
SBT3050LYB_R2_00001	TO-263	800 pcs / 13" reel	SBT3050LYB	Halogen free

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