



SB20W05T

Schottky Barrier Diode (Twin Type · Cathode Common)

50V, 2A Rectifier

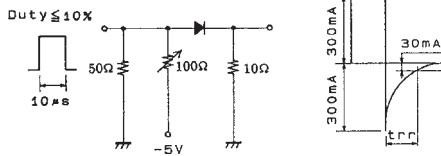
Applications

- High frequency rectification (switching regulators, converters, choppers).

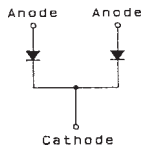
Features

- Low forward voltage (V_F max=0.55V).
- Fast reverse recovery time (t_{rr} max=20ns).
- Low switching noise.
- Low leakage current and high reliability due to highly reliable planar structure.

t_{rr} Test Circuit

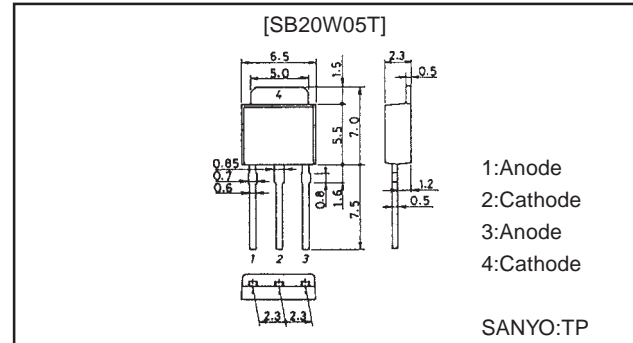


Electrical Connection

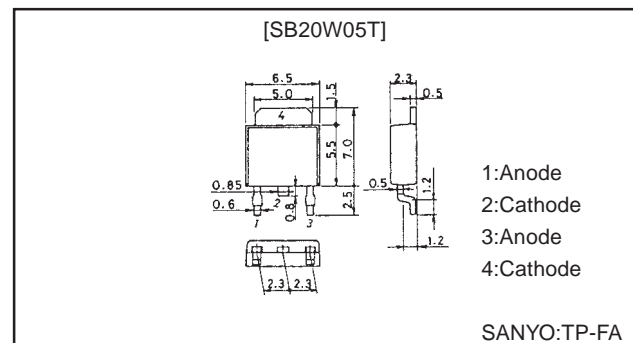


Package Dimensions

unit:mm
1254A



unit:mm
1257A



Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$ (Value per element)

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		50	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		55	V
Average Output Current	I_O	50Hz resistive load, $T_c=117^\circ\text{C}$	2	A
	I_O	50Hz resistive load, $T_c=110^\circ\text{C}$, Total rating	4	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	20	A
Junction Temperature	T_j		-55 to +125	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +125	$^\circ\text{C}$

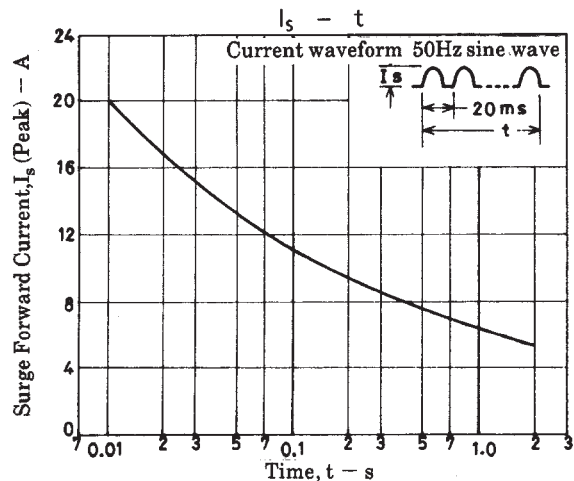
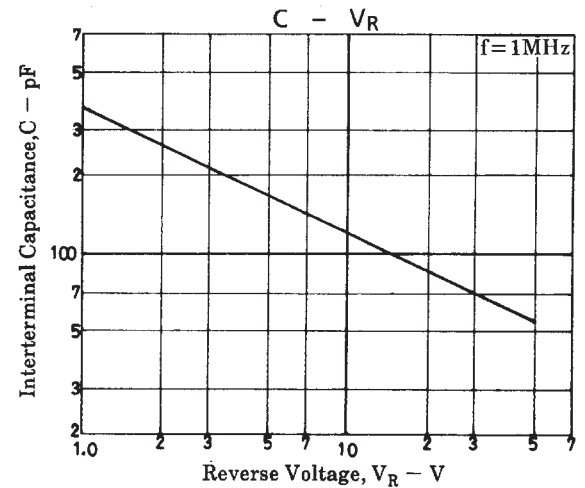
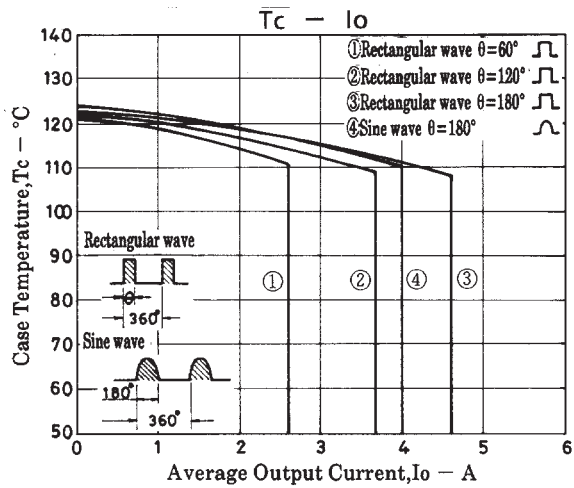
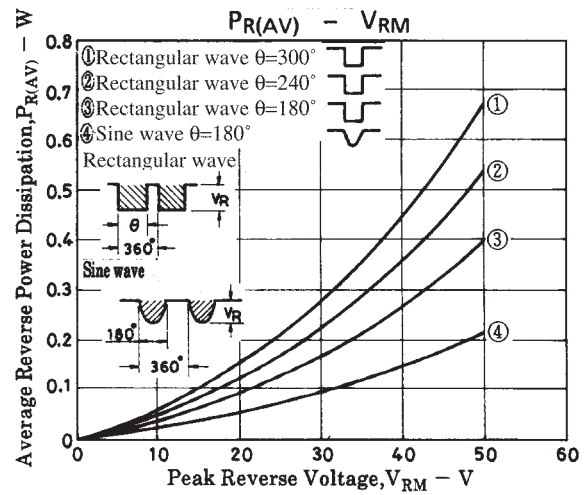
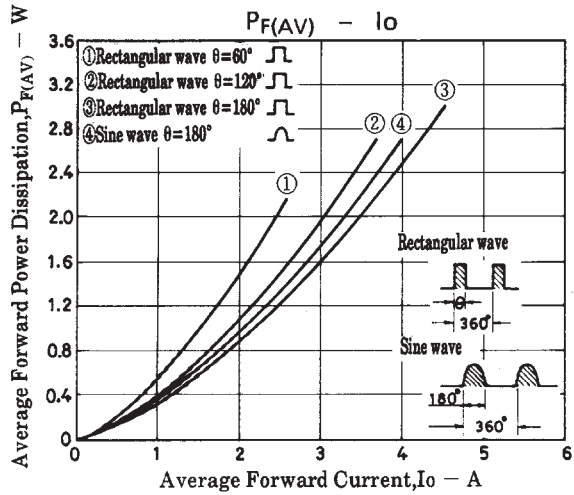
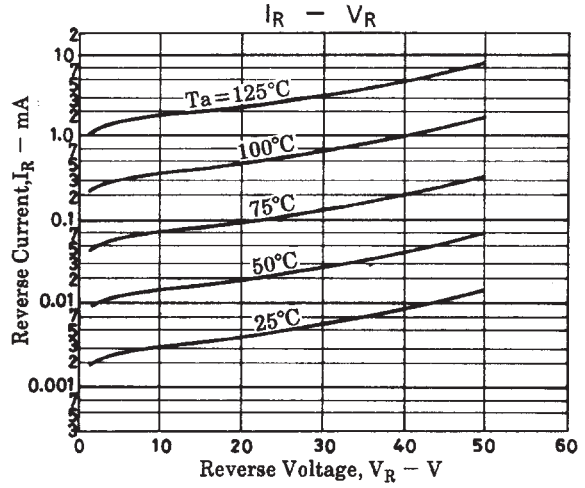
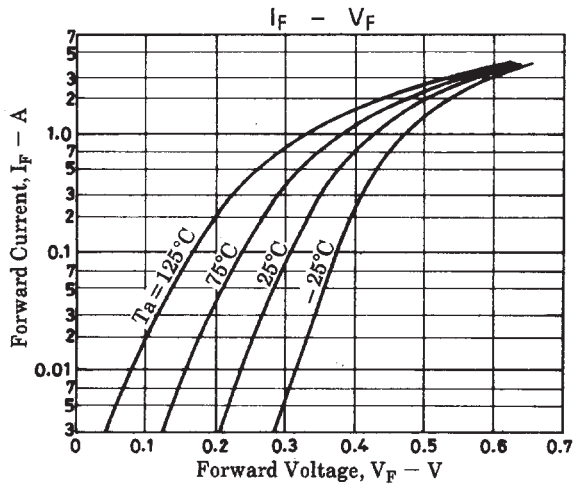
Electrical Characteristics at $T_a = 25^\circ\text{C}$ (Value per element)

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=1\text{mA}$	50			V
Forward Voltage	V_F	$I_F=2\text{A}$			0.55	V
Reverse Current	I_R	$V_R=25\text{V}$			200	μA
Interterminal Capacitance	C	$V_R=10\text{V}$, $f=1\text{MHz}$		120		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=300\text{mA}$, See specified Test Circuit.			20	ns
Thermal Resistance (Junction-Ambient)	$R_{th(j-a)}$			90		$^\circ\text{C/W}$
Thermal Resistance (Junction-Case)	$R_{th(j-c)}$			5		$^\circ\text{C/W}$

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