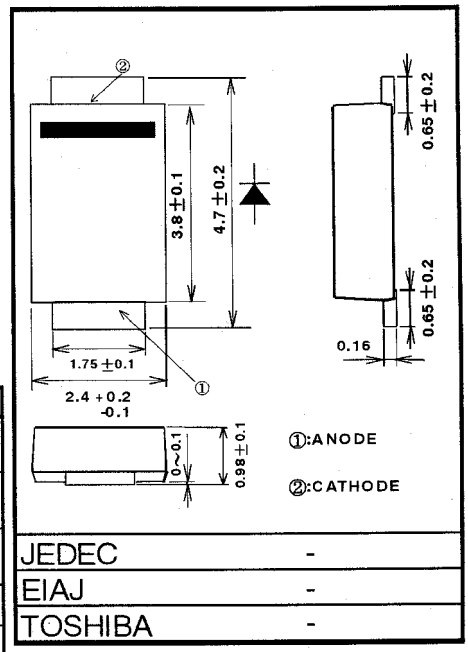
TOSHIBA SCHOTTKY BARRIER RECTIFIER SCHOTTKY BARRIER TYPE

CMS05

Unit:mm

○SWITHING MODE POWER SUPPLY APPLICATIONS
○PORTABLE EQUIPMENT BATTERY APPLICATIONS



JEDEC	-
EIAJ	-
TOSHIBA	-

Weight:0.023g

● **Forward Voltage** : V_{FM}=0.45V(Max.)

● **Average Forward Current** : $I_{F(AV)}$=5.0A

● **Repetitive Peak Reverse Voltage** : V_{RRM}=30V

● **Small & Thin Package**
M-FLAT™ (Toshiba package name)

● MAXIMUM RATINGS

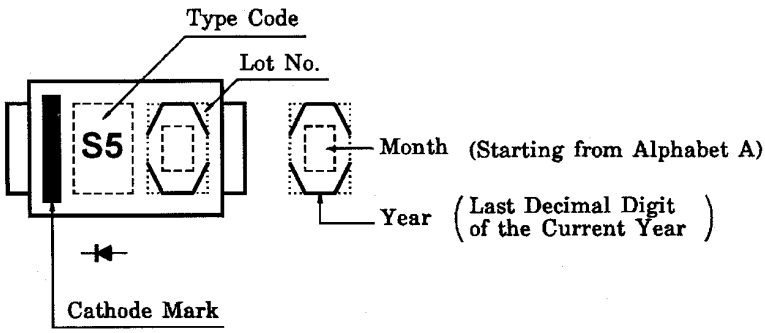
CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Average Forward Current	$I_{F(AV)}$	5.0 (Tl=100℃)	A
Peak One Cycle Surge Forward Current(Non-Repetitive)	I_{FSM}	70(50Hz)	A
Junction Temperature	T_j	-40～150	℃
Storage Temperature	Tstg	-40～150	℃

● ELECTRICAL CHARACTERISTICA(Ta=25℃)

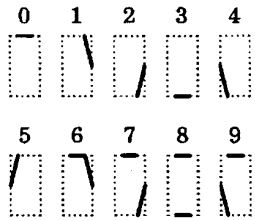
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Forward Voltage	$V_{FM(1)}$	I_{FM}=1.0A	-	0.35	-	V
	$V_{FM(2)}$	I_{FM}=3.0A	-	0.40	-	V
	$V_{FM(3)}$	I_{FM}=5.0A	-	0.43	0.45	V
Repetitive Peak Reverse Current	I_{RRM}	V_{RRM}=5.0V	-	6.0	-	μA
	I_{RRM}	V_{RRM}=30V	-	65	800	μA
Junction Capacitance	Cj	V_R=10V,f=1.0MHz	-	330	-	pF
Thermal Resistance	Rth(j-a)	On ceramic substrate (Soldering Land 2mm×2mm)	-	-	60	℃/W
		On glass-epoxy substrate (Soldering Land 6mm×6mm)	-	-	135	℃/W
	Rth(j-l)	-	-	-	16	℃/W

TOSHIBA is continually working to improve the quality and the reliability of its products.nevertheless,semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer,when utilizing TOSHIBA products, to observe standards of safety,and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life,bodily injury or damage to property.In developing your designsplese ensure that TOSHIBA products are used within specified operatingranqes as set forth in the most recent products specifications.Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.
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The information contained herein is subject to change without notice.

MARKING

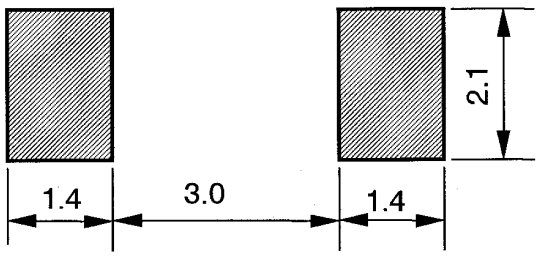


FOLLOWING INDICATES
THE DATE OF MANUFACTURE



Standard Soldering pad

Unit:mm



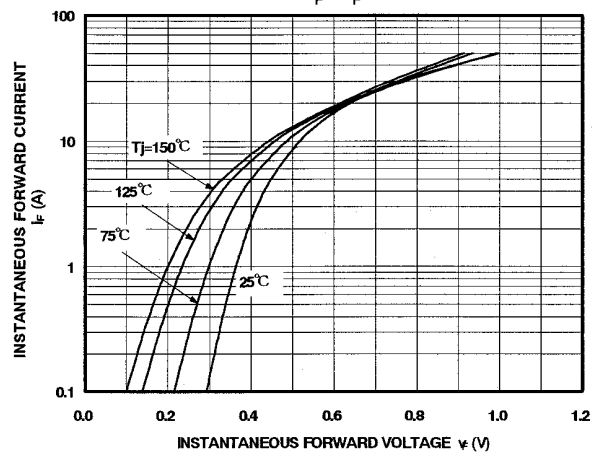
HANDLING PRECAUTION

Schottky barrier diodes are having large-reverse-current-leakage characteristic compare to the other rectifier products.

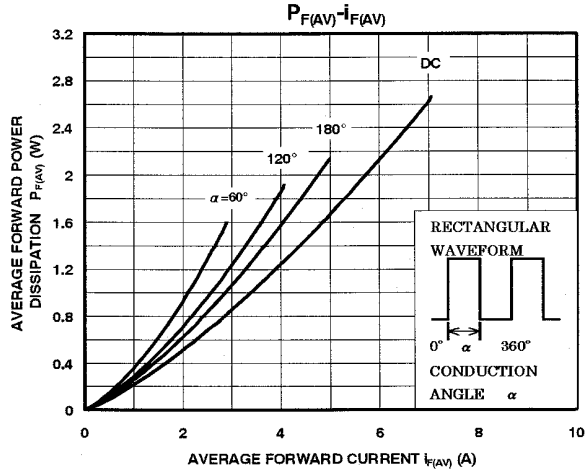
This current leakage and not proper operating temperature or voltage may cause thermal run.

Please take forward and reverse loss into consideration when you design

$i_F - v_F$

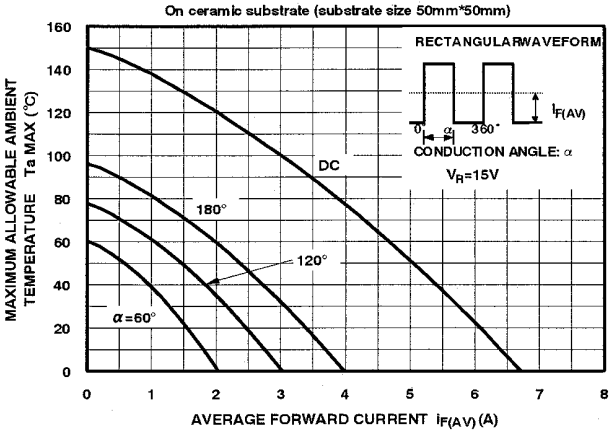


$P_{F(AV)} - i_{F(AV)}$

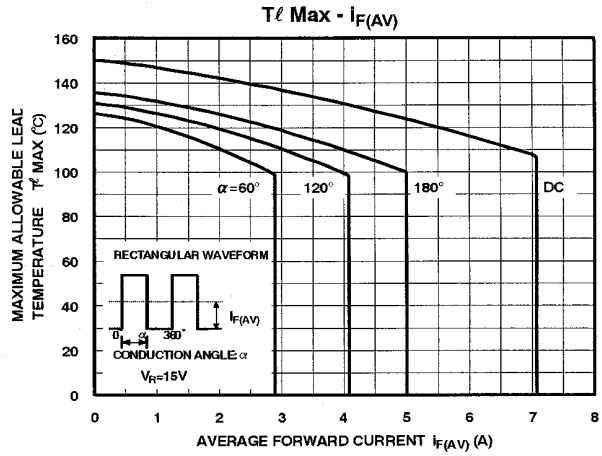


Ta Max - $i_{F(AV)}$

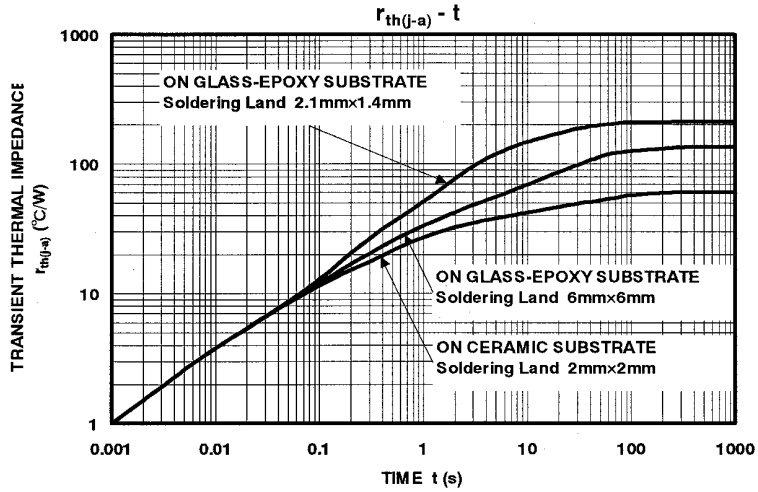
On ceramic substrate (substrate size 50mm*50mm)



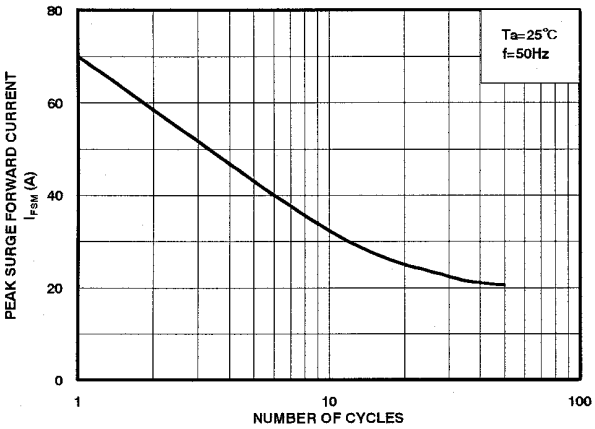
Tℓ Max - $i_{F(AV)}$



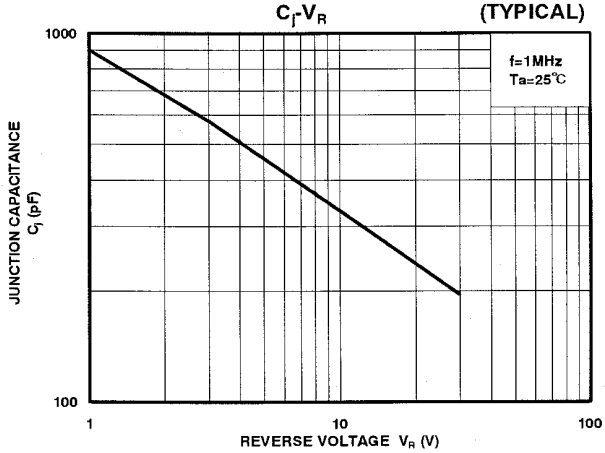
$r_{th(j-a)} - t$



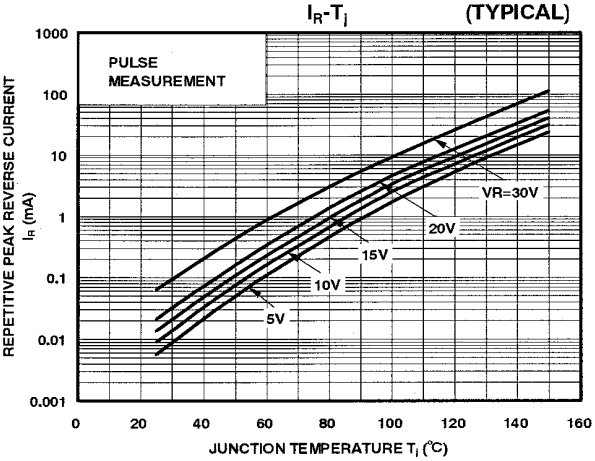
SURGE FORWARD CURRENT (NON-REPETITIVE)



C_j-V_R (TYPICAL)



I_R-T_j (TYPICAL)



$P_{R(AV)}$ - V_R (TYPICAL)

