

TOSHIBA Schottky Barrier Rectifier Schottky Barrier Type

CMS04

Switching Mode Power Supply Applications
 Portable Equipment Battery Applications

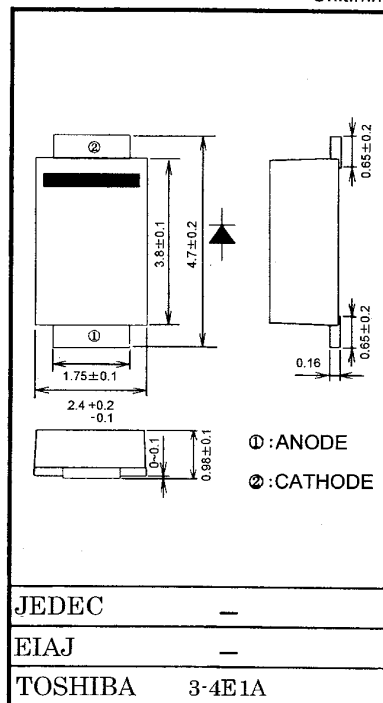
Unit:mm

- Forward voltage: $V_{FM} = 0.37 \text{ V (max)}$
- Average forward current: $I_F (AV) = 5.0 \text{ A}$
- Repetitive peak reverse voltage: $V_{RRM} = 30 \text{ V}$
- Small & thin package: "M-FLAT™" (Toshiba package name)

Maximum Ratings

Characteristics	Symbol	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}	30	V
Average forward current (Note)	$I_F (AV)$	5 ($T_l = 36.7^\circ\text{C}$)	A
Peak one cycle surge forward current (non-repetitive)	I_{FSM}	70 (50 Hz)	A
Junction temperature	T_j	-40~150	°C
Storage temperature	T_{stg}	-40~150	°C

Note: Rectangular waveform ($\alpha = 180^\circ$), $V_R = 15 \text{ V}$



Weight: 0.023g

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Peak forward voltage	$V_{FM} (1)$	$I_{FM} = 1 \text{ A}$	—	0.27	—	V
	$V_{FM} (2)$	$I_{FM} = 3 \text{ A}$	—	0.31	—	
	$V_{FM} (3)$	$I_{FM} = 5 \text{ A}$	—	0.35	0.37	
Repetitive peak reverse current	$I_{RRM} (1)$	$V_{RRM} = 5 \text{ V}$	—	0.31	—	mA
	$I_{RRM} (2)$	$V_{RRM} = 30 \text{ V}$	—	3.3	8.0	
Junction capacitance	C_j	$V_R = 10 \text{ V}$, $f = 1.0 \text{ MHz}$	—	330	—	pF
Thermal resistance	$R_{th} (j-a)$	On ceramic substrate (soldering land 2 mm × 2 mm)	—	—	60	°C/W
		On glass-epoxy substrate (soldering land 6 mm × 6 mm)	—	—	135	
	$R_{th} (j-t)$	—	—	—	16	

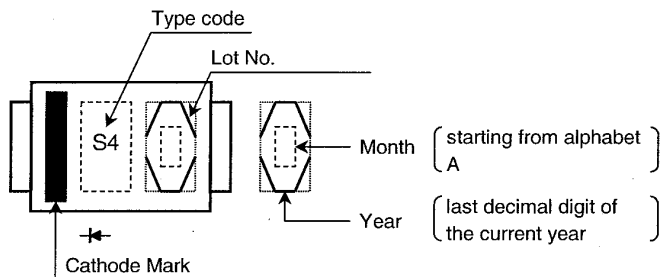
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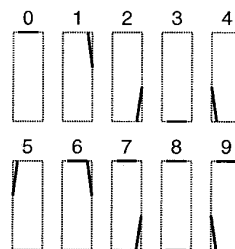
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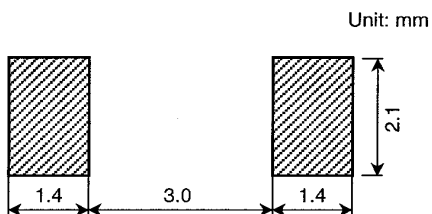
Marking



Following Indicates the Data of Manufacture



Standard Soldering Pad



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 runaway. Please take forward and reverse loss into consideration when you design.

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