

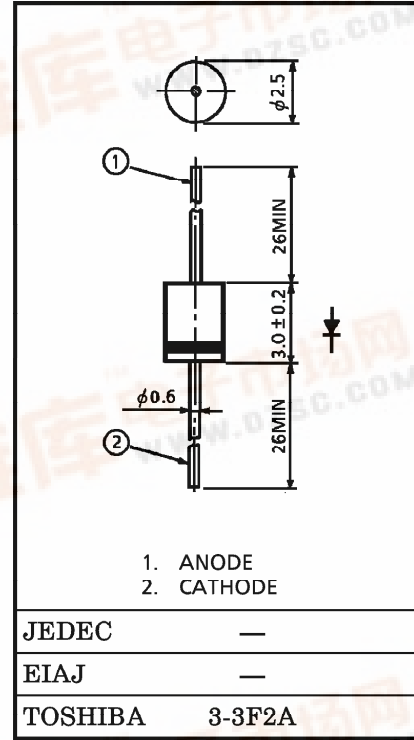
TOSHIBA SUPER FAST RECOVERY RECTIFIER SILICON DIFFUSED TYPE

# 05NU42

SWITCHING TYPE POWER SUPPLY APPLICATIONS

Unit in mm

- Repetitive Peak Reverse Voltage :  $V_{RRM}=1000V$
- Average Forward Current :  $I_F(AV)=0.5A$
- Very Fast Reverse-Recovery Time :  $t_{rr}=100ns$ (Max.)



MAXIMUM RATINGS

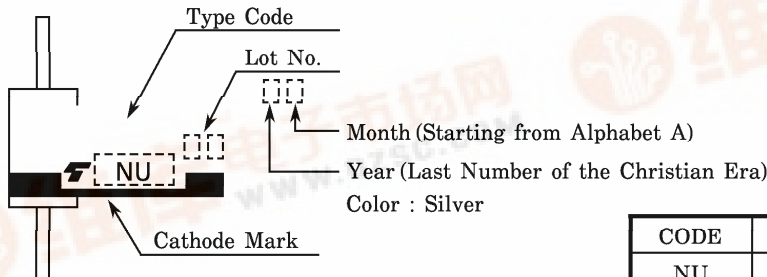
CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Reverse Voltage	$V_{RRM}$	1000	V
Average Forward Current	$I_F(AV)$	0.5	A
Peak One Cycle Surge Forward Current (Non-Repetitive)	$I_{FSM}$	10 (50Hz)	A
		11 (60Hz)	
Junction Temperature Range	$T_j$	-40~150	°C
Storage Temperature Range	$T_{stg}$	-40~150	°C

Weight : 0.18g

ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Forward Voltage	$V_{FM}$	$I_{FM}=0.5A$	—	—	3.0	V
Repetitive Peak Reverse Current	$I_{RRM}$	$V_{RRM}=1000V$	—	—	100	$\mu A$
Reverse Recovery Time	$t_{rr}$	$I_F=1A, di/dt = -30A/\mu s$	—	—	100	ns
Forward Recovery Time	$t_{fr}$	$I_F=1.0A$	—	300	—	ns

Marking



CODE	TYPE
NU	05NU42

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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 designs, please ensure that TOSHIBA products are used within specified operating ranges 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.

