



SF5GZ47, SF5JZ47

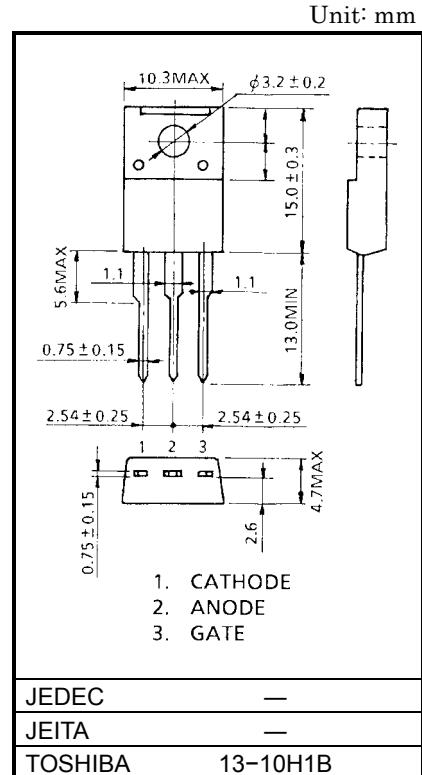
MEDIUM POWER CONTROL APPLICATIONS

- Repetitive Peak off-State Voltage : $V_{DRM} = 400, 600V$
- Repetitive Peak Reverse Voltage : $V_{RRM} = 400, 600V$
- Average On-State Current : $I_T (AV) = 5A$
- Isolation Voltage : $V_{Isol} = 1500V AC$

MAXIMUM RATINGS

CHARACTERISTIC		SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	SF5GZ47	V_{DRM} V_{RRM}	400	V
	SF5JZ47		600	
Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, $T_j = 0\sim125^\circ C$)	SF5GZ47	V_{RSM}	500	V
	SF5JZ47		720	
Average On-State Current (Half Sine Waveform $T_c = 85^\circ C$)	$I_T (AV)$		5	A
R.M.S. On-State Current	$I_T (RMS)$		7.8	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	I_{TSM}	80 (50Hz)	A
			88 (60Hz)	
I^2t Limit Value	I^2t		32	A^2s
Critical Rate of Rise of On-State Current (Note 1)	di / dt		100	$A/\mu s$
Peak Gate Power Dissipation	P_{GM}		5	W
Average Gate Power Dissipation	$P_G (AV)$		0.5	W
Peak Forward Gate Voltage	V_{FGM}		10	V
Peak Reverse Gate Voltage	V_{RGM}		-5	V
Peak Forward Gate Current	I_{GM}		2	A
Junction Temperature	T_j		-40~125	$^\circ C$
Storage Temperature Range	T_{stg}		-40~125	$^\circ C$
Isolation Voltage (AC, $t = 1min.$)	V_{Isol}		1500	V

Note 1: di / dt test condition, $V_{DRM} = 0.5 \times$ Rated, $I_{TM} \leq 15A$, $t_{gw} \geq 10\mu s$, $t_{gr} \leq 250ns$, $i_{gp} = I_{GT} \times 2.0$

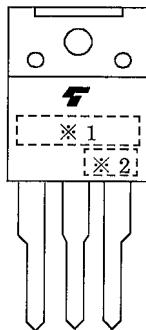


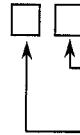
Weight: 1.7g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} I_{RRM}	$V_{DRM} = V_{RRM} = \text{Rated}$	—	—	10	μA
Peak On-State Voltage	V_{TM}	$I_{TM} = 15\text{A}$	—	—	1.5	V
Gate Trigger Voltage	V_{GT}	$V_D = 6\text{V}, R_L = 10\Omega$	—	—	1.0	V
Gate Trigger Current	I_{GT}		—	—	10	mA
Gate Non-Trigger Voltage	V_{GD}	$V_D = \text{Rated} \times 2 / 3, T_c = 125^\circ\text{C}$	0.2	—	—	V
Critical Rate of Rise of Off-State Voltage	dv / dt	$V_{DRM} = \text{Rated}, T_c = 125^\circ\text{C}$ Exponential Rise	—	50	—	V / μs
Holding Current	I_H	$V_D = 6\text{V}, I_{TM} = 1\text{A}$	—	—	40	mA
Latching Current	I_L	$V_D = 6\text{V}, f = 50\text{Hz}, t_{gw} = 50\mu\text{s}$ $i_G = 30\text{mA}$	—	—	50	mA
Thermal Resistance	$R_{th(j-c)}$	Junction to Case	—	—	4.2	$^\circ\text{C} / \text{W}$

MARKING



*1	TYPE	F5GZ47	TYPE NAME	SF5GZ47
		F5JZ47		SF5JZ47
*2	Lot Number  Month (Starting from Alphabet A) Year (Last Decimal Digit of the Current Year)		Example 8A:January 1998 8B:February 1998 8L:December 1998	

