

HIGH VOLTAGE NPN SILICON POWER TRANSISTOR INTENDED FOR USE IN THE SWITCHED MODE POWER SUPPLY OF TELEVISION RECEIVERS.

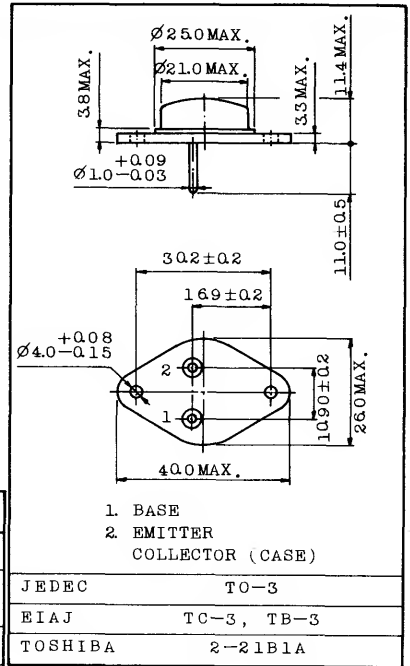
FEATURES:

- High Breakdown Voltage : $V_{CES}=750V$
- Low Saturation Voltage
: $V_{CE(sat)}=5V(\text{Max.})$ at $I_C=4A, I_B=1A$
- High speed : $t_f=0.15\mu s$ (Typ.)

MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	750	V
		V_{CEX} ($-V_{BE}=1.5V$)	750	V
		V_{CEO}	300	V
Collector Current	DC	I_C	3	A
	Peak	I_{CM}	6	A
		$-I_{CM}$	3	A
Base Current	DC	I_B	2	A
	Peak	I_{BM}	2	A
		$-I_B(AV)$	100	mA
		(DC or averaged over any 20mS period)		
		$-I_{BM}$	1.5	A
		(turn-off current)		
Total Collector Power Dissipation ($T_c=25^\circ C$)		P_{tot}	50	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-65 ~ 150	$^\circ C$
Thermal Resistance		$R_{th(j-c)}$	2.5	$^\circ C/W$

Unit in mm



Mounting Kit No. AC42C

Weight : 17.0g

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CES(1)}$	$V_{CE}=750V, V_{BE}=0$	-	-	0.5	mA
		$I_{CES(2)}$	$V_{CE}=750V, V_{BE}=0$ $T_j=125^{\circ}C$	-	-	2	mA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=6V, I_C=0$	-	-	5	mA
DC Current Gain		h_{FE}	$V_{CE}=5V, I_C=1A$	15	-	60	
Collector-Emitter Saturation Voltage		$V_{CE(sat)(1)}$	$I_C=2.5A, I_B=0.25A$	-	-	10	V
		$V_{CE(sat)(2)}$	$I_C=4A, I_B=1A$	-	-	5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=2.5A, I_B=0.25A$	-	-	1.5	V
Collector-Emitter Sustaining Voltage		$V_{CEO(SUS)}$	Fig. 1	300	-	-	V
Transition Frequency		f_T	$V_{CE}=10V, I_C=0.2A,$ $f=1MHz$	-	8	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=10V, I_E=0,$ $f=1MHz$	-	85	-	pF
Emitter Capacitance		C_{TE}	$V_{EB}=2V, I_C=0,$ $f=1MHz$	-	1.4	-	nF
Switching Time	Fall Time	t_f	Fig. 2	-	0.15	-	μs
	Storage Time	t_{stg}		-	1.2	-	μs