TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2 S C 5 3 5 9

POWER AMPLIFIER APPLICATIONS

- High Collector Voltage: VCEO=230V (Min.)
- Complementary to 2SA1987
- Recommend for 100W High Fidelity Audio Frequency Amplifier Output Stage.

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CBO}	230	V
Collector-Emitter Voltage	V_{CEO}	230	V
Emitter-Base Voltage	v_{EBO}	5	V
Collector Current	$I_{\mathbf{C}}$	15	Α
Base Current	$I_{\mathbf{B}}$	1.5	Α
Collector Power Dissipation (Tc=25°C)	$P_{\mathbf{C}}$	180	w
Junction Temperature	Tj	150	°C
Storage Temperature Range	${ m T_{stg}}$	-55~150	°C

Unit in mm ϕ 3.3 ± 0.2 5.45 ± 0.15 +0.25 BASE COLLECTOR (HEAT SINK) **EMITTER JEDEC EIAJ**

Weight: 9.75g (Typ.)

2-21F1A

TOSHIBA

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 230V, I_{E} = 0$	_	_	5.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_{C}=0$	—	_	5.0	μ A
Collector-Emitter Breakdown Voltage	V (BR) CEO	$I_{C}=50mA, I_{B}=0$	230	_	_	V
DC Current Gain	h _{FE (1)} (Note)	$V_{\rm CE}$ =5V, $I_{\rm C}$ =1A	55	_	160	_
	$_{ m hFE(2)}$	$V_{CE}=5V, I_{C}=7A$	35	87	_	
Collector-Emitter Saturation Voltage	V _{CE (sat)}	$I_{C}=8A, I_{B}=0.8A$	_	0.4	3.0	V
Base-Emitter Voltage	$v_{ m BE}$	$V_{CE}=5V, I_{C}=7A$	—	1.0	1.5	V
Transition Frequency	$ m f_{T}$	$V_{CE}=5V, I_{C}=1A$	_	30	_	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_{E} = 0, f = 1MHz$	_	200	_	pF

(Note) h_{FE} (1) Classification R: $55\sim110$, O: $80\sim160$

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