

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

# 2SC5154

POWER AMPLIFIER APPLICATIONS

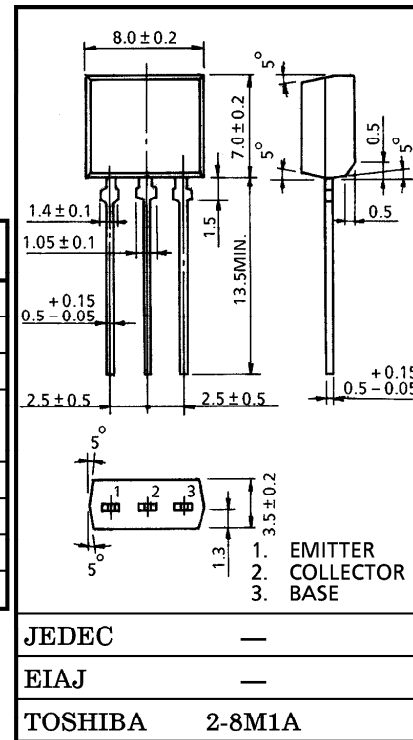
DRIVER STAGE AMPLIFIER APPLICATIONS

- High Transition Frequency :  $f_T=100\text{MHz}$  (Typ.)

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CB0}$	160	V
Collector-Emitter Voltage		$V_{CE0}$	160	V
Emitter-Base Voltage		$V_{EB0}$	5	V
Collector Current	DC	$I_C$	1.5	A
	Pulse	$I_{CP}$	3	
Base Current		$I_B$	0.15	A
Collector Power Dissipation		$P_C$	1.3	W
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	-65~150	$^\circ\text{C}$

Unit in mm



Weight : 0.55g (Typ.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=160\text{V}, I_E=0$	—	—	1.0	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$	—	—	1.0	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C=10\text{mA}, I_B=0$	160	—	—	V
DC Current Gain	$h_{FE}$ (Note)	$V_{CE}=5\text{V}, I_C=100\text{mA}$	70	—	240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	—	—	1.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=5\text{V}, I_C=500\text{mA}$	—	0.75	0.95	V
Transition Frequency	$f_T$	$V_{CE}=10\text{V}, I_C=100\text{mA}$	—	100	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	—	25	—	pF

Note :  $h_{FE}$  Classification    O : 70~140,    Y : 120~240

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