

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (DARLINGTON POWER TRANSISTOR)

2SD2384

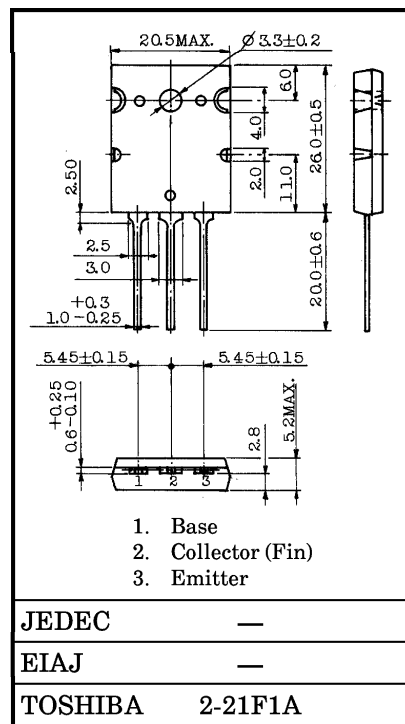
POWER AMPLIFIER APPLICATIONS

- High Breakdown Voltage : $V_{CE0} = 140V$ (Min.)
- Complementary to 2SB1555

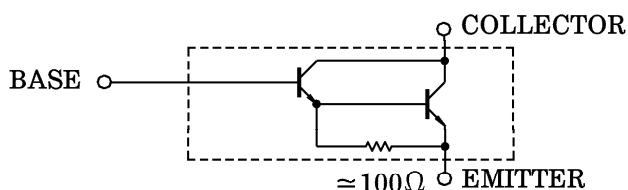
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	140	V
Collector-Emitter Voltage	V_{CE0}	140	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	7	A
Base Current	I_B	0.1	A
Collector Power Dissipation (Tc = 25°C)	P_C	100	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

Unit in mm



EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTIC (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-Off Current	I_{CB0}	$V_{CB} = 140V, I_E = 0$	—	—	5.0	μA
Emitter Cut-Off Current	I_{EB0}	$V_{EB} = 5V, I_C = 0$	—	—	5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C = 50mA, I_B = 0$	140	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = 5V, I_C = 6A$	5000	—	30000	—
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 10A$	2000	—	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 6A, I_B = 6mA$	—	—	2.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 5V, I_C = 6A$	—	—	3.0	V
Transition Frequency	f_T	$V_{CE} = 5V, I_C = 1A$	—	30	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	90	—	pF

Note : $h_{FE(1)}$ Classification A : 5000~12000, B : 9000~18000, C : 15000~30000

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