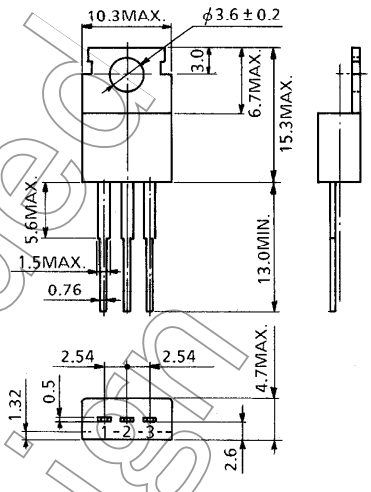
TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SD525

POWER AMPLIFIER APPLICATIONS

- High Breakdown Voltage : V_{CEO} = 100V
- Low Collector Saturation Voltage : $V_{CE\ (sat)}$ = 2.0V (Max.)
- Complementary to 2SB595.
- Recommend for 30W High Fidelity Audio Frequency Amplifier Output Stage.

Unit in mm



1. BASE
2. COLLECTOR (HEAT SINK)
3. EMITTER

JEDEC	TO-220AB
EIAJ	SC-46
TOSHIBA	2-10A1A

Weight : 1.9g (Typ.)

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	5	A
Base Current	I_B	0.5	A
Collector Power Dissipation (Tc = 25°C)	P_C	40	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

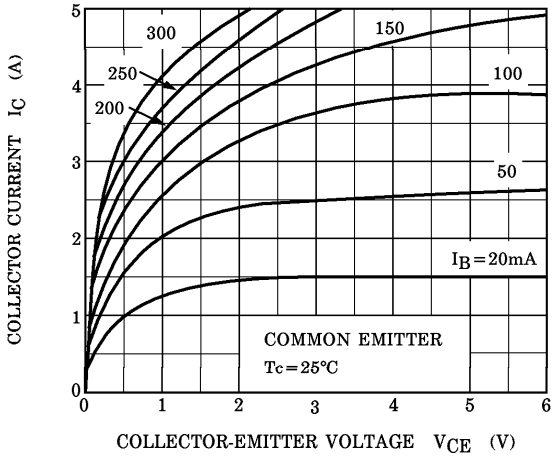
ELECTRICAL CHARACTERISTICS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 100V, I_E = 0	—	—	100	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	—	—	1	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)\ CEO}$	I_C = 50mA, I_B = 0	100	—	—	V
DC Current Gain	$h_{FE\ (1)}$ (Note)	V_{CE} = 5V, I_C = 1A	40	—	240	
	$h_{FE\ (2)}$	V_{CE} = 5V, I_C = 4A	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C = 4A, I_B = 0.4A	—	—	2.0	V
Base-Emitter Voltage	V_{BE}	V_{CE} = 5V, I_C = 1A	—	—	1.5	V
Transition Frequency	f_T	V_{CE} = 5V, I_C = 1A	—	12	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	100	—	pF

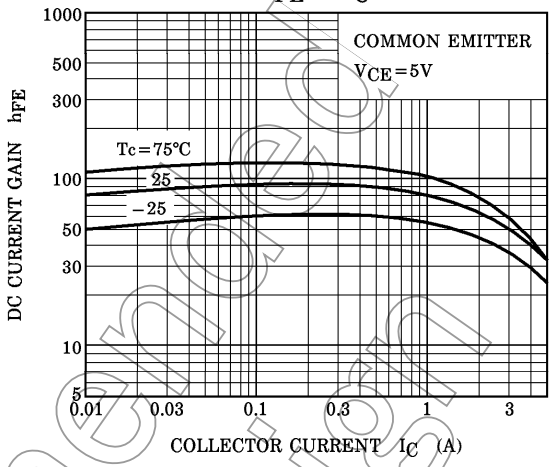
Note : $h_{FE\ (1)}$ Classification R : 40~80, O : 70~140, Y : 120~240

Not Recommended for New Design

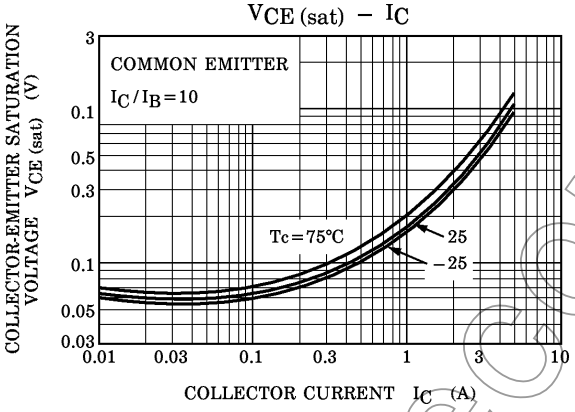
I_C – V_{CE}



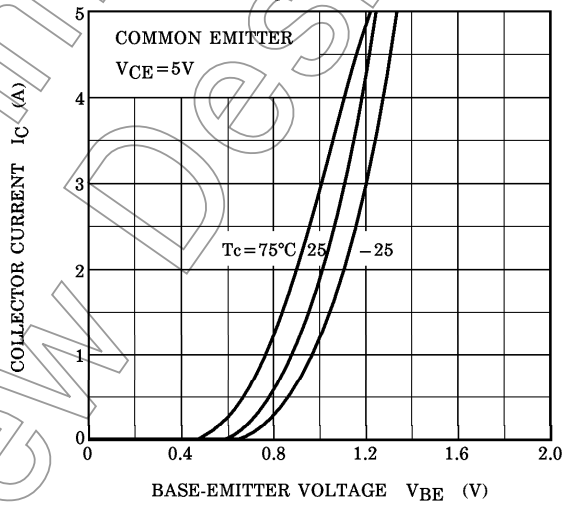
h_{FE} – I_C



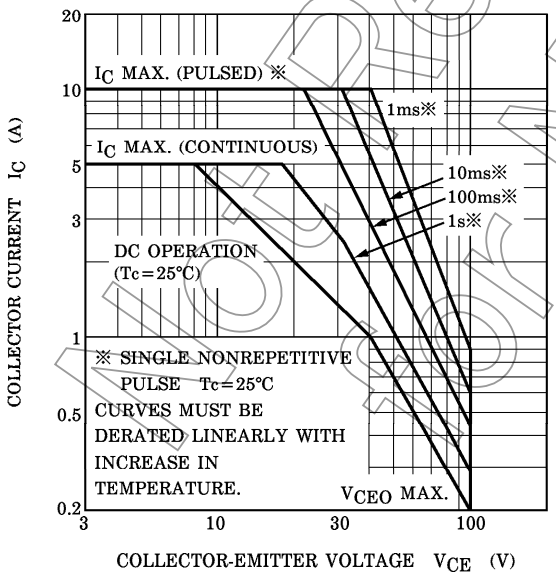
$V_{CE\,(sat)}$ – I_C



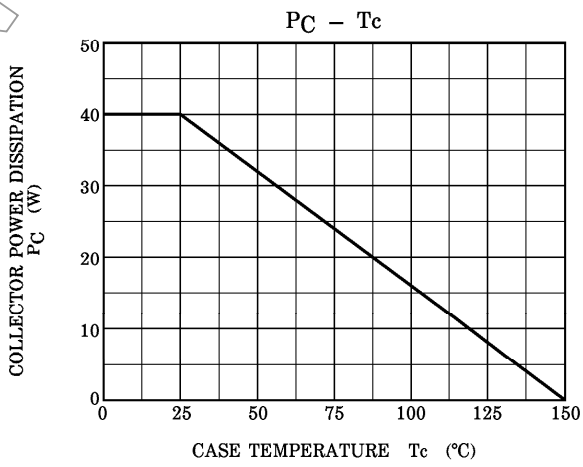
I_C – V_{BE}



SAFE OPERATING AREA



P_C – Tc



Not Recommended for New Design

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