2SD1148

SILICON NPN TRIPLE DIFFUSED TYPE

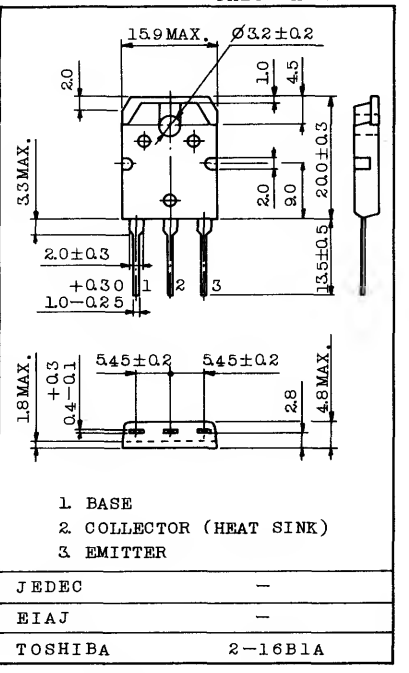
POWER AMPLIFIER APPLICATIONS.

FEATURES:

. Complementary to 2SB863.

. Recommend for 70W High Fidelity Audio Frequency Amplifier Output Stage.

Unit in mm



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

JEDEC	—
EIAJ	—
TOSHIBA	2−16B1A

Weight : 4.6g

MAXIMUM RATINGS (Ta=25°C)

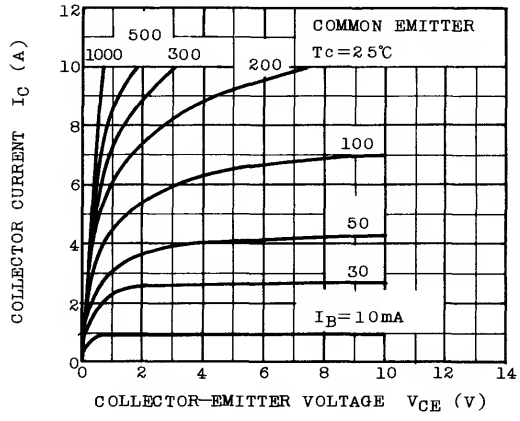
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	140	V
Collector-Emitter Voltage	V_{CEO}	140	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	10	A
Base Current	I_B	1	A
Collector Power Dissipation (Tc=25°C)	P_C	100	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	−55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°)

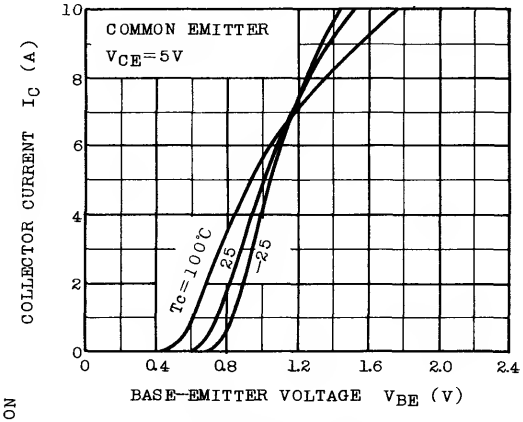
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=140V, I_E=0	-	-	5.0	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	5.0	μA
Collecotr-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=50mA, I_B=0	140	-	-	V
DC Current Gain	$h_{FE(1)}$ (Note)	V_{CE}=5V, I_C=1A	55	-	160	
	$h_{FE(2)}$	V_{CE}=5V, I_C=5A	25	-	-	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=5A, I_B=0.5A	-	0.4	2.0	V
Base-Emitter Voltage	V_{BE}	V_{CE}=5V, I_C=5A	-	0.96	1.5	V
Transition Frequency	f_T	V_{CE}=10V, I_C=1A	-	20	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	200	-	pF

Note: $h_{FE(1)}$ Classification, R : 55~110 O : 80~160

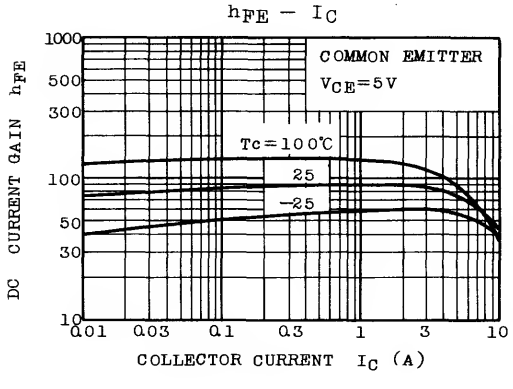
$I_C - V_{CE}$



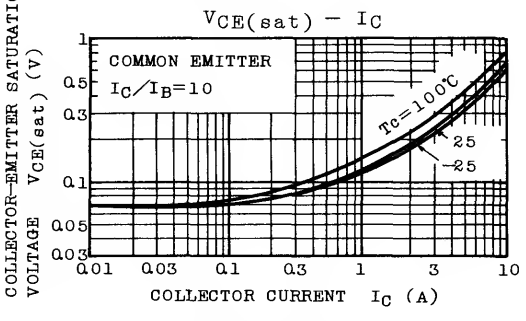
$I_C - V_{BE}$



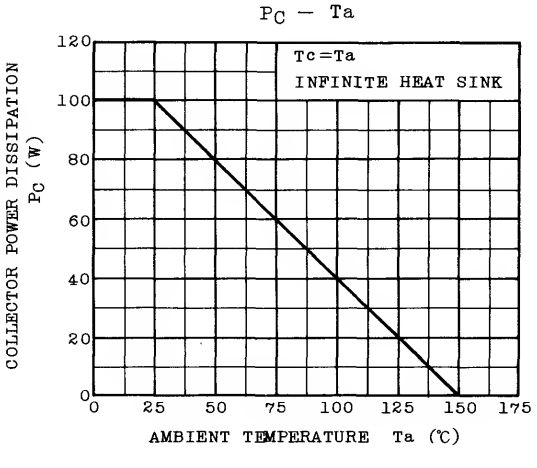
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$P_C - Ta$



SAFE OPERATING AREA