SILICON PNP TRIPLE DIFFUSED MESA TYPE

2SA739

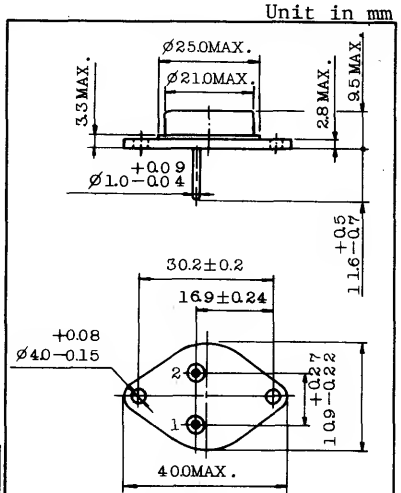
INDUSTRIAL APPLICATIONS

HIGH VOLTAGE SWITCHING APPLICATIONS.

FEATURES:

- High Voltage : V_{CEO}=-400V
- Low Saturation Voltage : $V_{CE(sat)}$=-1.5V (Max.)
  (I_C=-1A, I_B=-0.2A)

Unit in mm



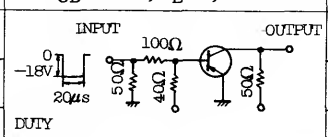
JEDEC	TO-204MA/TO-3
EIAJ	TC-3, TB-3
TOSHIBA	2-21E1A

Mounting Kit No. AC73
Weight : 15.8g

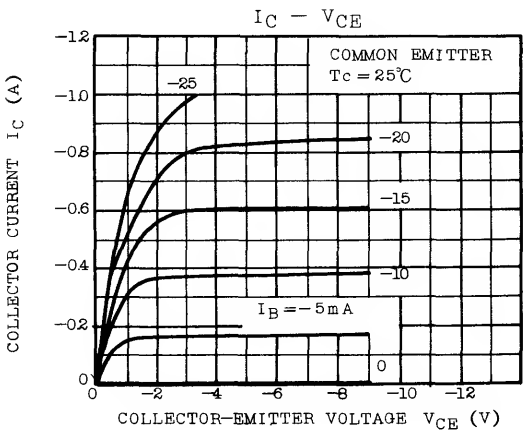
MAXIMUM RATINGS (Ta=25°C)

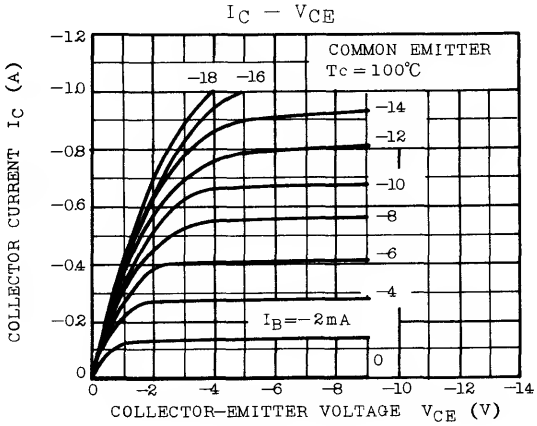
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-400	V
Collector-Emitter Voltage	V_{CEO}	-400	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-3	A
Base Current	I_B	-1	A
Collector Power Dissipation (Tc=25°C)	P_C	50	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-65∿150	°C

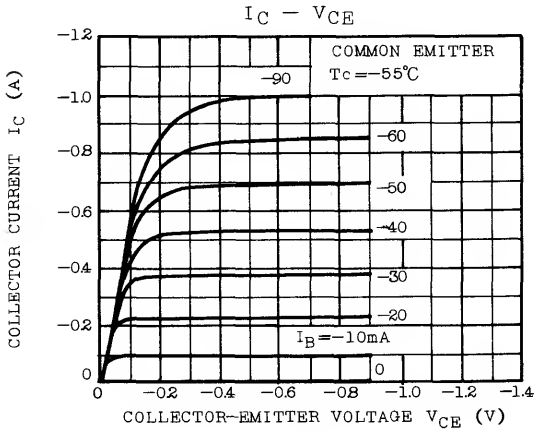
ELECTRICAL CHARACTERISTICS (Ta=25°C)

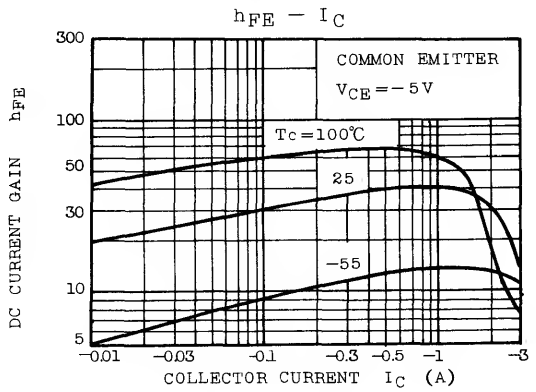
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-300V, I_E=0	-	-	-100	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-1	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-400	-	-	V
DC Current Gain		h_{FE}	V_{CE}=-5V, I_C=-0.5A	20	-	300	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-1A, I_B=-0.2A	-	-	-1.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=-1A, I_B=-0.2A	-	-	-2.0	V
Collector Output Capacitance		C_{ob}	V_{CB}=-50V, I_E=0, f=1MHz	-	100	-	pF
Switching Time	Turn-on Time	t_{on}		-	1.0	-	μs
	Storage Time	t_{stg}		-	2.0	-	
	Fall Time	t_f		-	1.0	-	

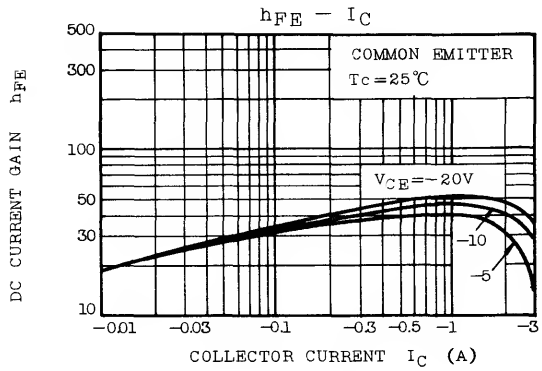
DUTY CYCLE≦2% V_{BB}=3V V_{CC}=-25V

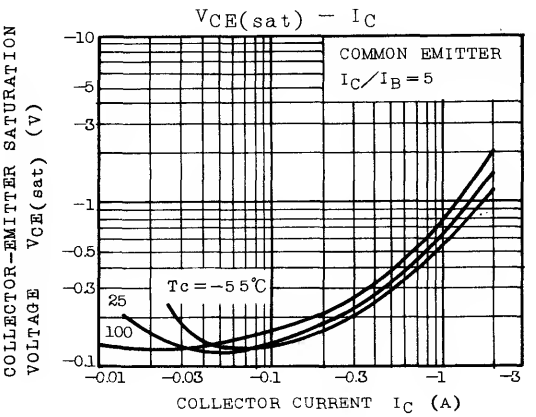

I_C – V_{CE}
COMMON EMITTER
Tc = 25℃
−25
−20
−15
−10
I_B = −5mA
0
COLLECTOR CURRENT I_C (A)
COLLECTOR–EMITTER VOLTAGE V_{CE} (V)


I_C – V_{CE}
COMMON EMITTER
Tc = 100℃
−18
−16
−14
−12
−10
−8
−6
−4
I_B = −2mA
0
COLLECTOR CURRENT I_C (A)
COLLECTOR–EMITTER VOLTAGE V_{CE} (V)

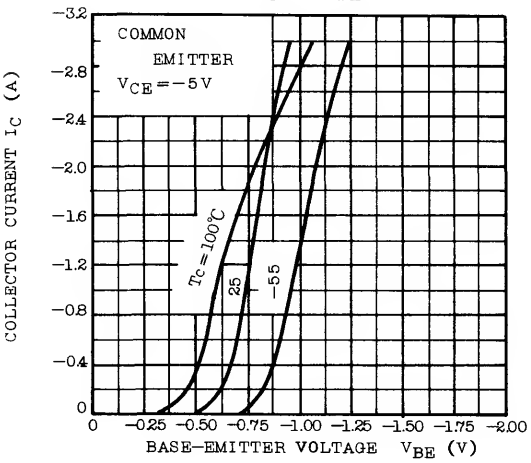

I_C – V_{CE}
COMMON EMITTER
Tc = −55℃
−90
−60
−50
−40
−30
−20
I_B = −10mA
0
COLLECTOR CURRENT I_C (A)
COLLECTOR–EMITTER VOLTAGE V_{CE} (V)


h_{FE} – I_C
COMMON EMITTER
V_{CE} = −5V
Tc = 100℃
25
−55
DC CURRENT GAIN h_{FE}
COLLECTOR CURRENT I_C (A)

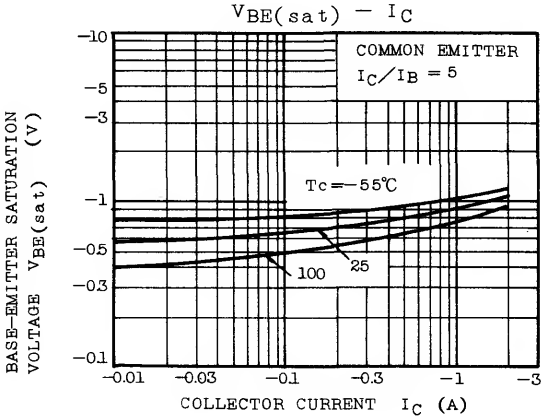

h_{FE} – I_C
COMMON EMITTER
Tc = 25℃
V_{CE} = −20V
−10
−5
DC CURRENT GAIN h_{FE}
COLLECTOR CURRENT I_C (A)


$V_{CE(sat)}$ – I_C
COMMON EMITTER
I_C/I_B = 5
Tc = −55℃
25
100
COLLECTOR–EMITTER SATURATION VOLTAGE $V_{CE(sat)}$ (V)
COLLECTOR CURRENT I_C (A)

$I_C - V_{BE}$



$V_{BE(sat)} - I_C$



SAFE OPERATING AREA