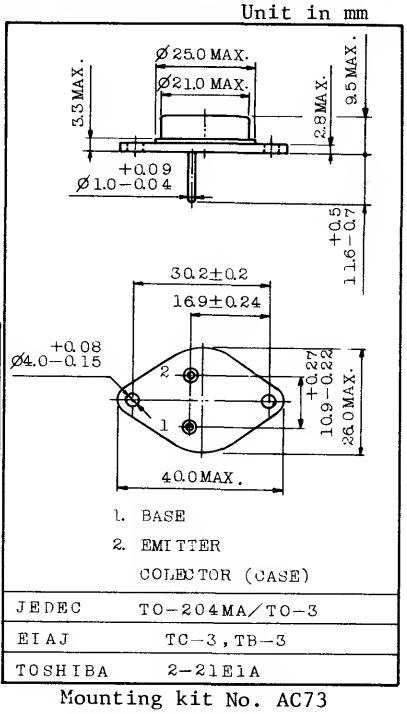
SILICON NPN TRIPLE DIFFUSED TYPE

2SC2914

SWITCHING REGULATOR AND HIGH VOLTAGE SWITCHING APPLICATIONS.
HIGH SPEED DC-DC CONVERTER APPLICATIONS.

INDUSTRIAL APPLICATIONS

Unit in mm



1. BASE
2. EMITTER
COLLECTOR (CASE)

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

Mounting kit No. AC73
Weight : 15.3g

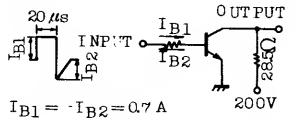
FEATURES:

- Excellent Switching Times
  : t_r=1.0μs(Max.), t_f=1.0μs(Max.) at I_C=7A
- High Collector Breakdown Voltage : V_{CEO}=400V

MAXIMUM RATINGS (Ta=25°C)

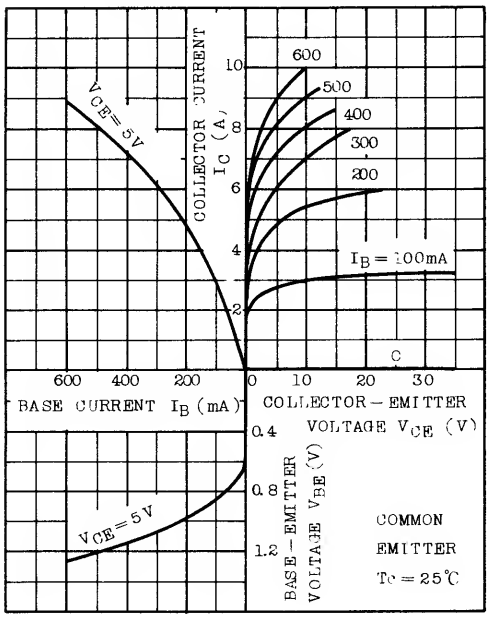
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	500	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	10	A
Base Current	I_B	3	A
Collector Power Dissipation (Tc=25°C)	P_C	120	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-65 ~ 150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

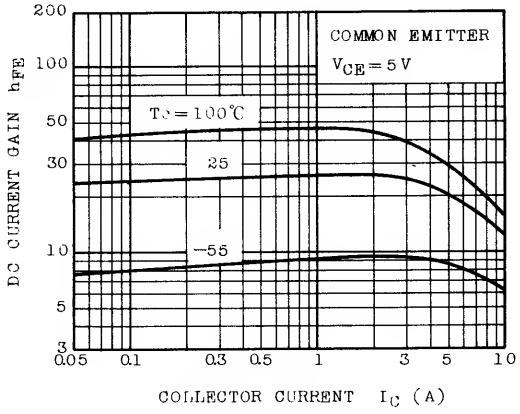
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=400V, I_E=0	-	-	100	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=7V, I_C=0	-	-	1	mA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	I_C=1mA, I_E=0	500	-	-	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=10mA, I_B=0	400	-	-	V
DC Current Gain		h_{FE}	V_{CE}=5V, I_C=5A	12	-	-	
			V_{CE}=5V, I_C=10A	8	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=10A, I_B=2A	-	-	1.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=10A, I_B=2A	-	-	2.0	V
Switching Time	Rise Time	t_r		-	-	1.0	μs
	Storage Time	t_{stg}		-	-	2.5	
	Fall Time	t_f		-	-	1.0	

I_{B1} = -I_{B2}=0.7A
DUTY CYCLE< 1%

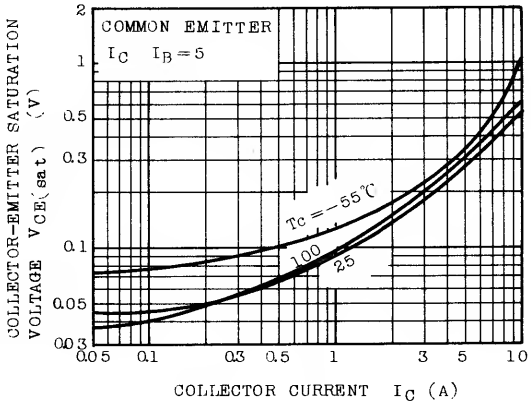
STATIC CHARACTERISTICS



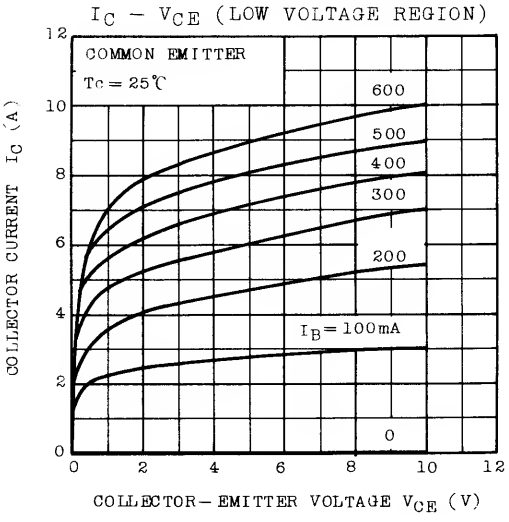
h_{FE} – I_C



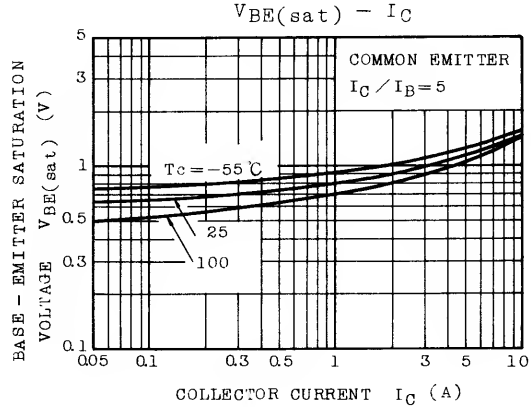
$V_{CE(sat)}$ – I_C



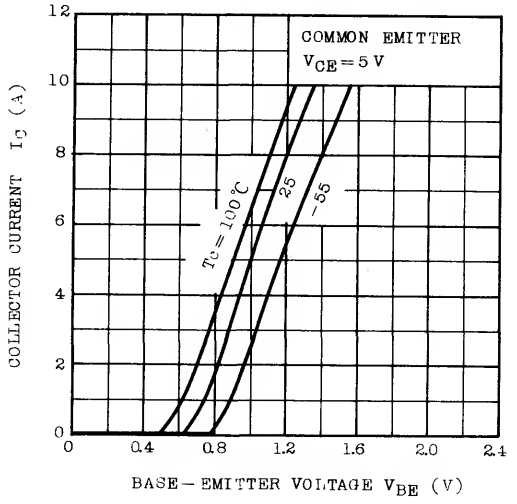
I_C – V_{CE} (LOW VOLTAGE REGION)



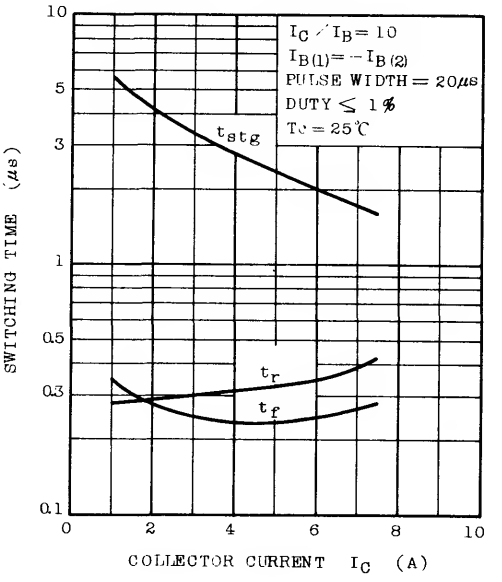
$V_{BE(sat)}$ – I_C



$I_C - V_{BE}$



SWICHING CHARACTERISTICS



SAFE OPERATING AREA