

2SC3007

SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

HIGH CURRENT SWITCHING APPLICATIONS.
HIGH SPEED DC-DC CONVERTER APPLICATION.

FEATURES:

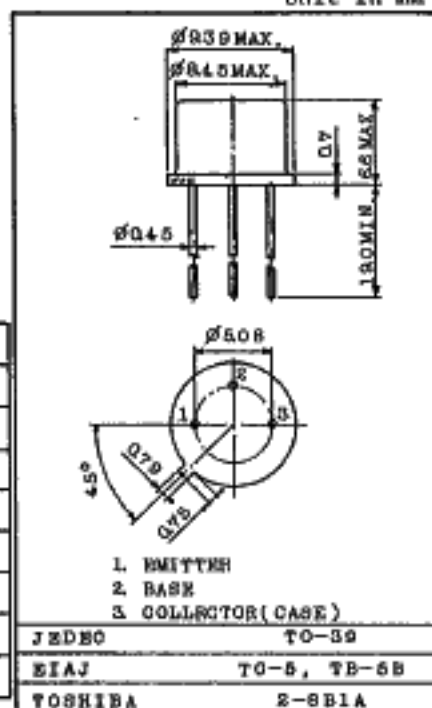
- . Low Collector Saturation Voltage
: $V_{CE(sat)}=0.5V(\text{Max.})$ at $I_C=1A$
- . High Speed Switching Time : $t_{stg}=1.0\mu s(\text{Typ.})$

MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2	A
Base Current	I_B	0.2	A
Collector Power Dissipation	P_C	800	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ C$

INDUSTRIAL APPLICATIONS

Unit in mm

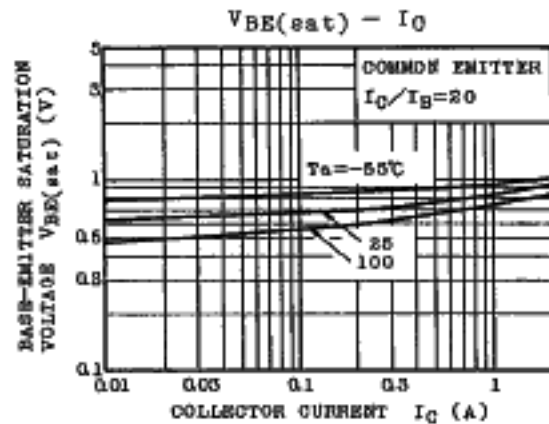
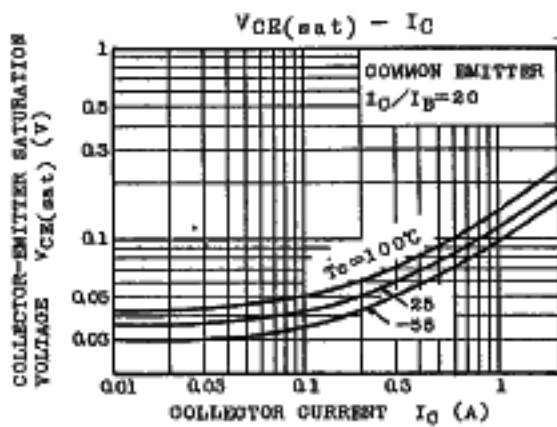
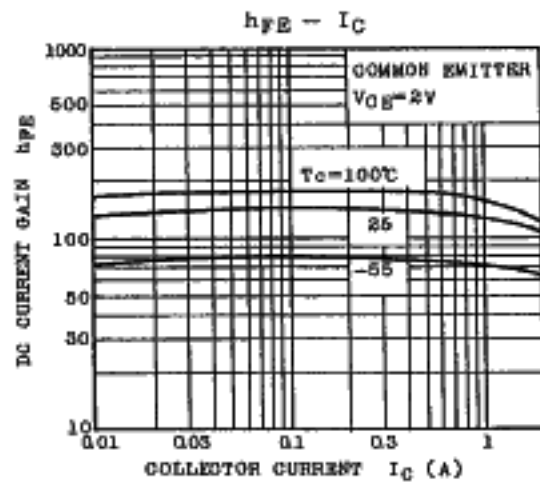
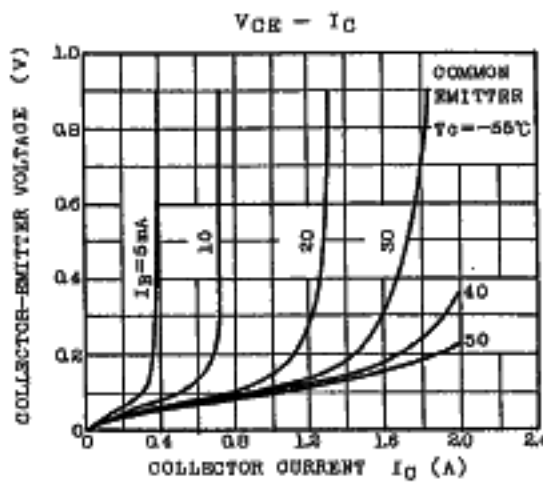
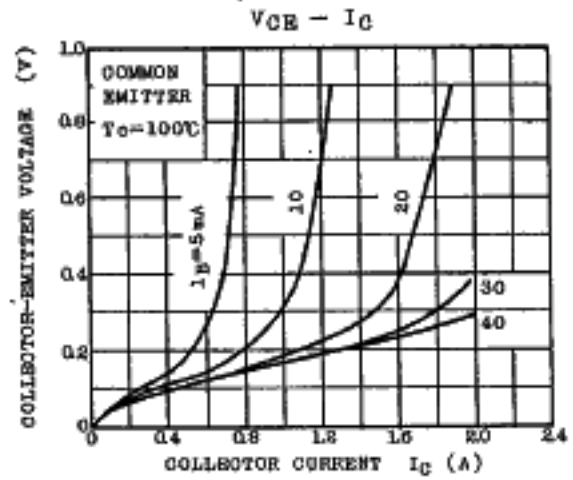
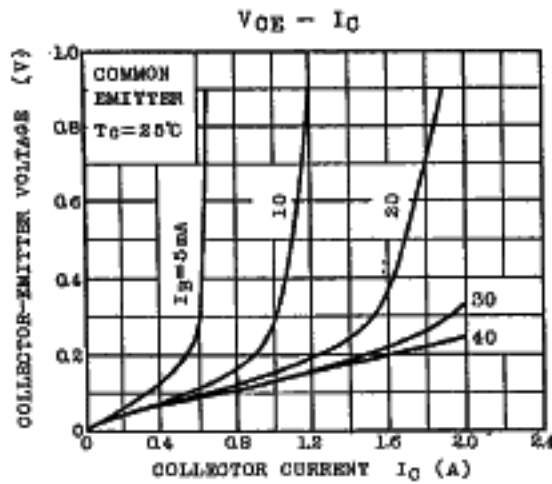


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

Weight : 1.13g

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=50V, I_B=0$	-	-	1.0	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	1.0	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	50	-	-	V
DC Current Gain		$h_{FE(1)}$	$V_{CE}=2V, I_C=0.5A$	70	-	240	
		$h_{FE(2)}$	$V_{CE}=2V, I_C=1.5A$	40	-	-	
Saturation Voltage	Base-Emitter	$V_{CE(sat)}$	$I_C=1A, I_B=0.05A$	-	-	0.5	V
	Collector-Emitter	$V_{BE(sat)}$	$I_C=1A, I_B=0.05A$	-	-	1.2	
Transition Frequency		f_T	$V_{CE}=2V, I_C=0.5A$	-	100	-	MHz
Collector Output Capacitance		C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	-	30	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.1	-	μs
	Fall Time	t_{stg}		-	1.0	-	
	Storage Time	t_f		-	0.1	-	

TOSHIBA CORPORATION



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