

# 2SC3346

SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

HIGH CURRENT SWITCHING APPLICATIONS.

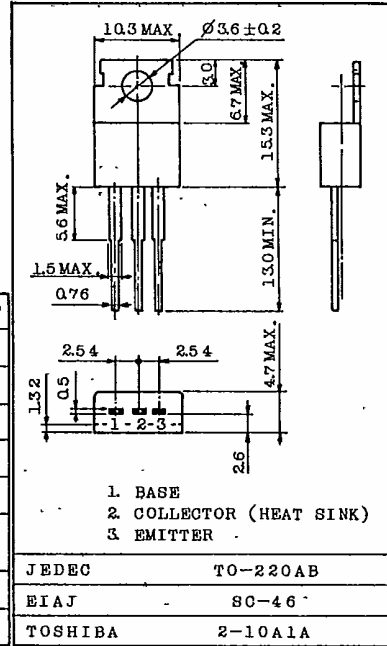
Unit in mm

**FEATURES:**

- Low Collector Saturation Voltage  
:  $V_{CE(sat)}=0.4V$  (Max.) (at  $I_C=6A$ )
- High Speed Switching Time :  $t_{stg}=1.0\mu s$  (Typ.)
- Complementary to 2SA1329

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	80	V
Collector-Emitter Voltage	$V_{CEO}$	80	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	12	A
Base Current	$I_B$	2	A
Collector Power Dissipation ( $T_c=25^\circ C$ )	$P_C$	40	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$

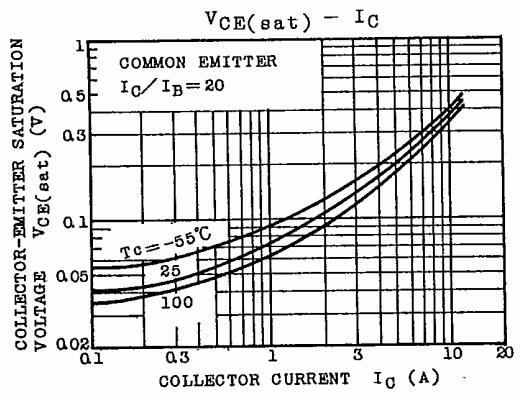
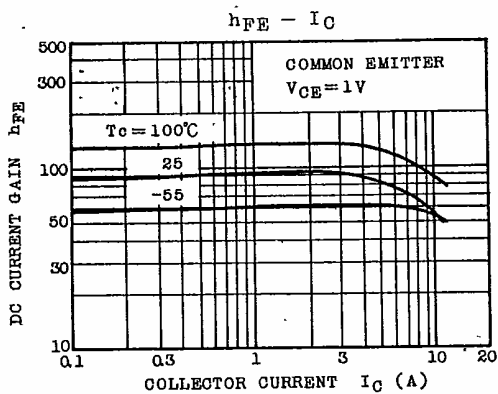
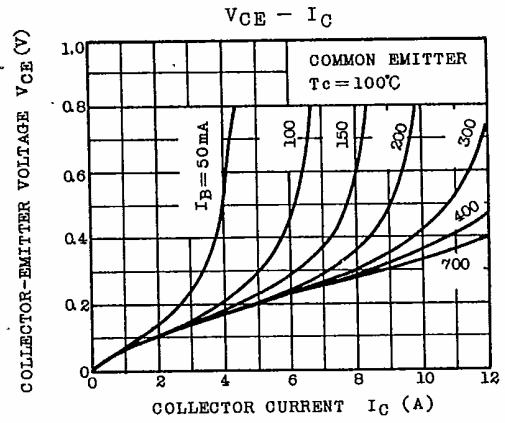
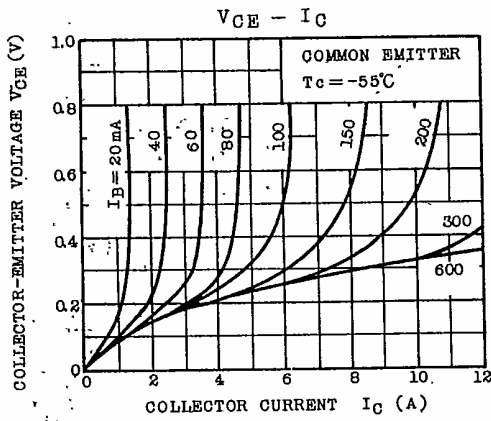
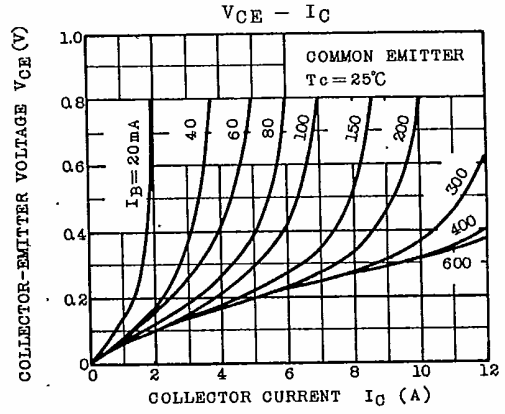
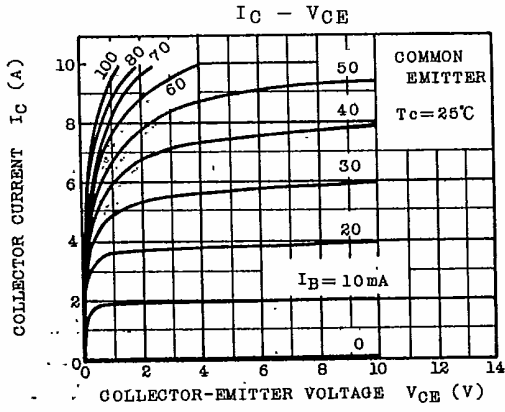


**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )**

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=80V, I_E=0$	-	-	10	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=6V, I_C=0$	-	-	10	$\mu A$
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=50mA, I_B=0$	80	-	-	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE}=1V, I_C=1A$	70	-	240	
		$h_{FE(2)}$	$V_{CE}=1V, I_C=6A$	40	-	-	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C=6A, I_B=0.3A$	-	0.2	0.4	V
	Base-Emitter	$V_{BE(sat)}$	$I_C=6A, I_B=0.3A$	-	0.9	1.2	
Transition Frequency		$f_T$	$V_{CE}=5V, I_C=1A$	-	80	-	MHz
Collector Output Capacitance		$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	220	-	pF
Switching Time	Turn-on Time	$t_{on}$		-	0.2	-	$\mu s$
	Storage Time	$t_{stg}$		-	1.0	-	
	Fall Time	$t_f$		-	0.2	-	

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

TOSHIBA CORPORATION



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