

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

# 2SC3327

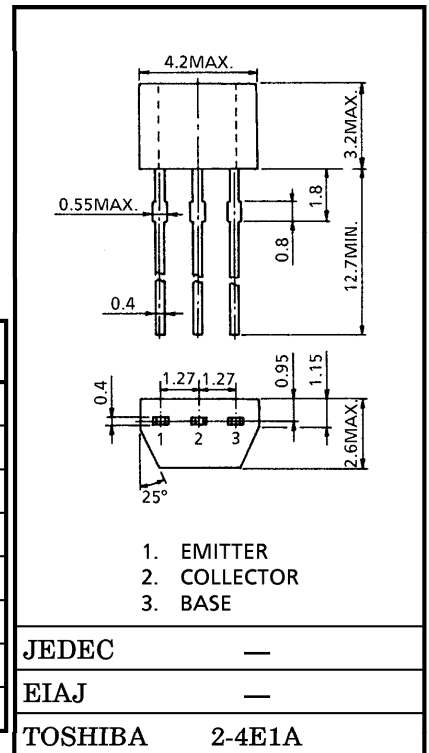
FOR MUTING AND SWITCHING APPLICATIONS

Unit in mm

- High Emitter-Base Voltage :  $V_{EBO} = 25V$  (Min.)
- High Reverse  $h_{FE}$  :  $h_{FE} = 150$  (Typ.) ( $V_{CE} = -2V$ ,  $I_C = -4mA$ )
- Low On Resistance :  $R_{ON} = 1\Omega$  (Typ.) ( $I_B = 5mA$ )
- Small Package

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	20	V
Emitter-Base Voltage	$V_{EBO}$	25	V
Collector Current	$I_C$	300	mA
Base Current	$I_B$	60	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ C$



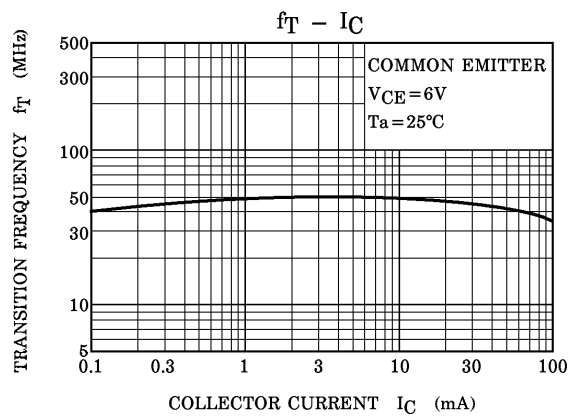
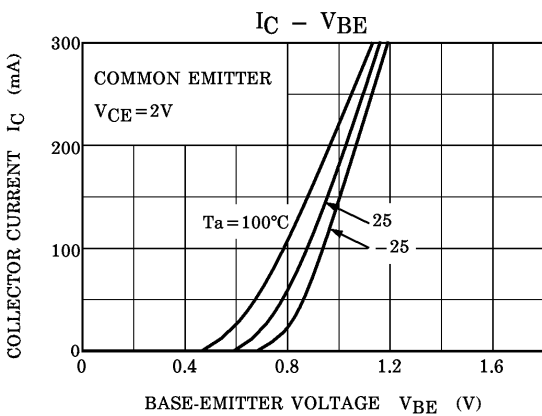
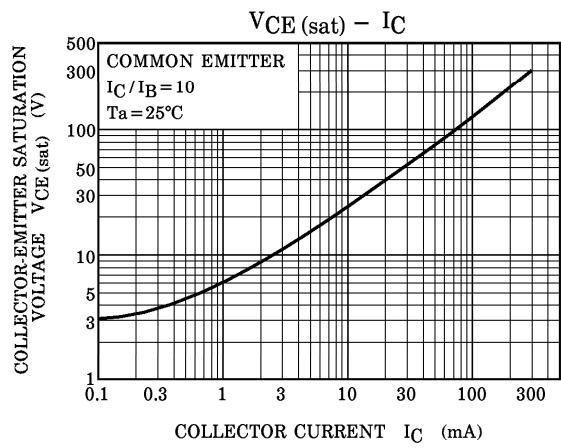
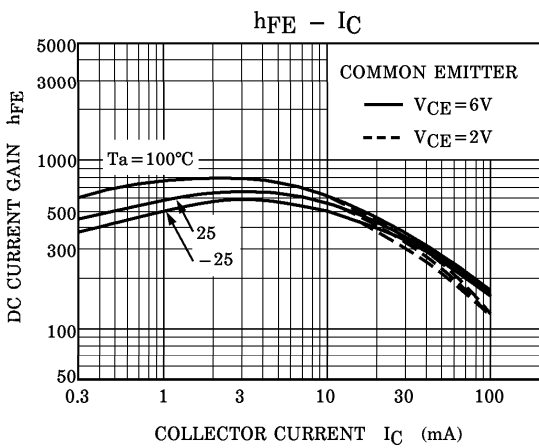
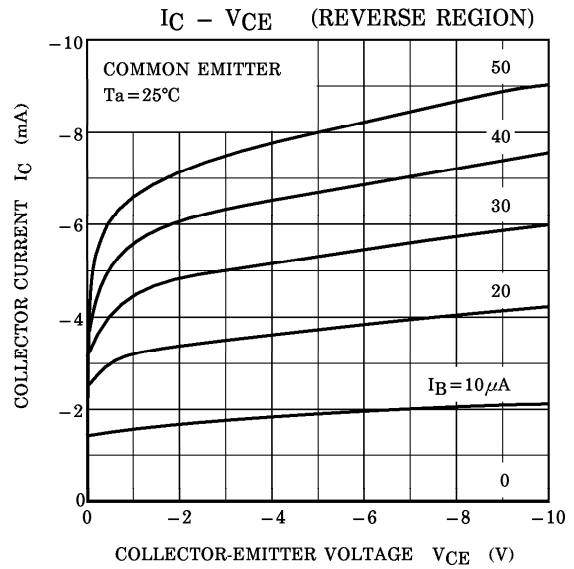
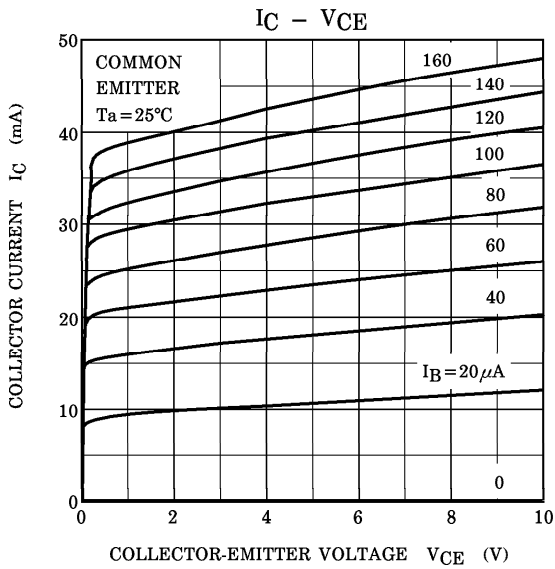
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

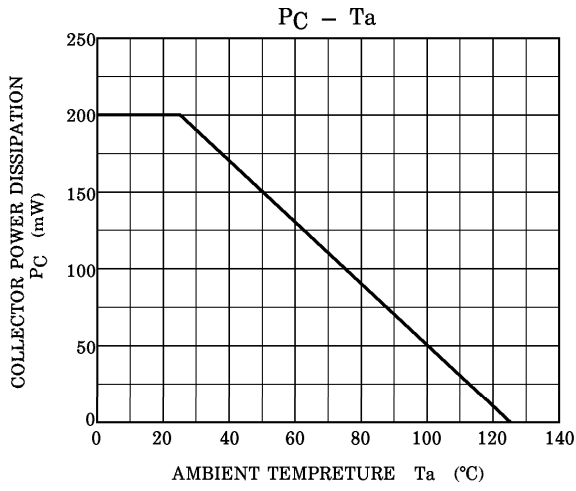
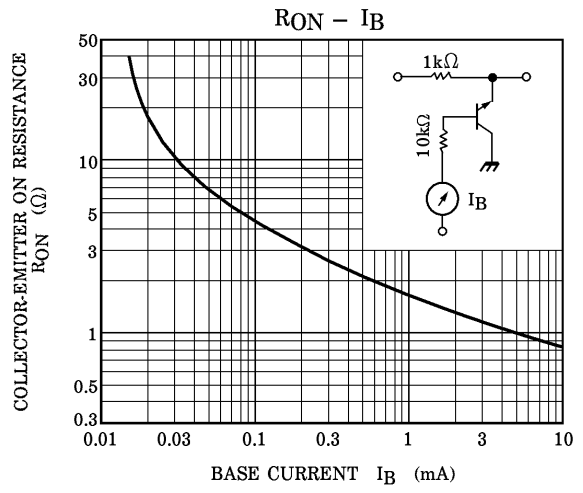
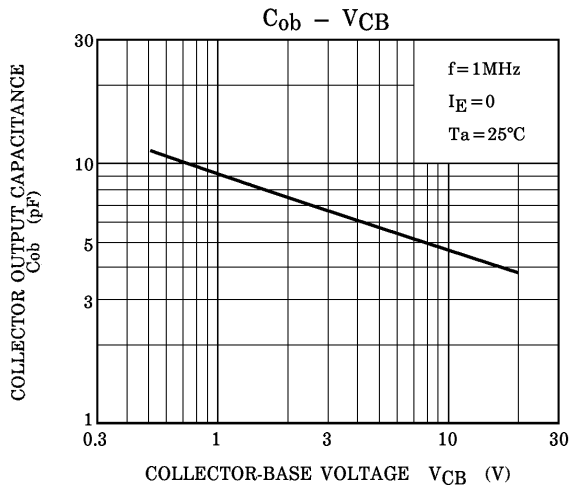
Weight : 0.13g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 50V$ , $I_E = 0$	—	—	0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 25V$ , $I_C = 0$	—	—	0.1	$\mu A$
DC Current Gain	$h_{FE}$ (Note)	$V_{CE} = 2V$ , $I_C = 4mA$	200	—	1200	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 30mA$ , $I_B = 3mA$	—	0.042	0.1	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = 2V$ , $I_C = 4mA$	—	0.61	—	V
Transition Frequency	$f_T$	$V_{CE} = 6V$ , $I_C = 4mA$	—	30	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10V$ , $I_E = 0$ , $f = 1MHz$	—	4.8	7	pF
Switching Time	Turn-on Time	$t_{on}$	—	160	—	ns
	Storage Time	$t_{stg}$	—	500	—	
	Fall Time	$t_f$	—	130	—	

INPUT 4k $\Omega$  OUTPUT  
 $10V$  0  $50\Omega$   $3k\Omega$   $1k\Omega$   
 $1\mu s$   $V_{BB} = -3V$   $V_{CC} = 12V$   
 DUTY CYCLE < 2%

Note :  $h_{FE}$  Classification    A : 200~700,    B : 350~1200





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