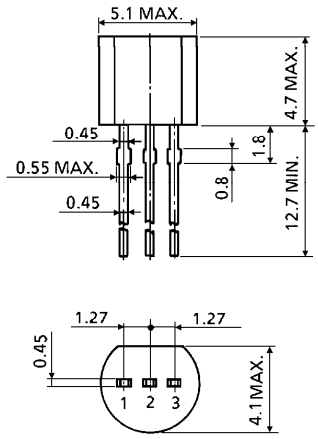
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC3279

STOROBO FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

Unit in mm



1. EMITTER
2. COLLECTOR
3. BASE

JEDEC	TO-92
EIAJ	SC-43
TOSHIBA	2-5F1B

Weight : 0.21 g

- High DC Current Gain and Excellent h_{FE} Linearity
  : $h_{FE\,(1)}$ = 140~600 (V_{CE} = 1V, I_C = 0.5A)
  : $h_{FE\,(2)}$ = 70 (Min.), 200 (Typ.) (V_{CE} = 1 V, I_C = 2 A)
- Low Saturation Voltage
  : $V_{CE\,(sat)}$ = 0.5 V (Max.) (I_C = 2 A, I_B = 50 mA)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	30	V
Collector-Emitter Voltage		V_{CES}	30	V
		V_{CEO}	10	
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	2	A
	Pulsed (Note 1)	I_{CP}	5	
Base Current		I_B	0.2	A
Collector Power Dissipation		P_C	750	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

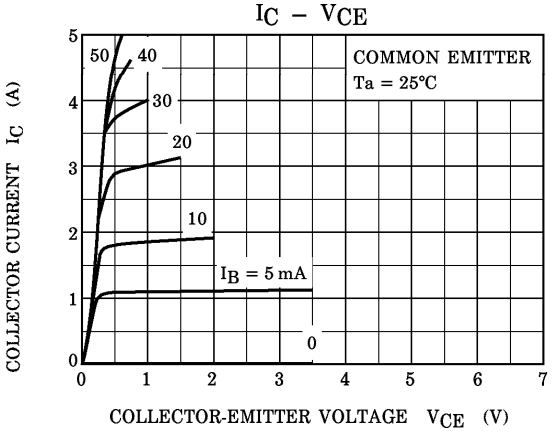
(Note 1) : Pulse Width = 10 ms (Max.), Duty Cycle = 30% (Max.)

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

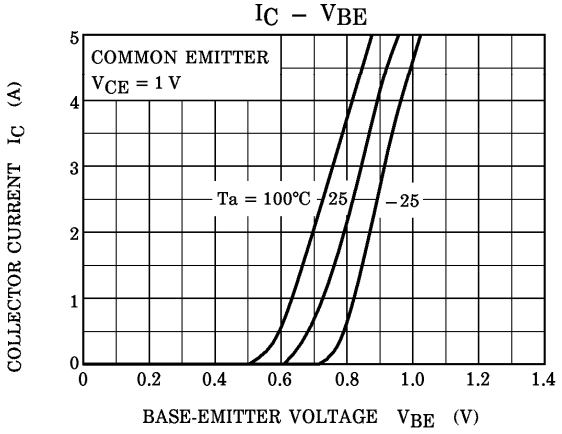
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB} = 30 V, I_E = 0	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 6 V, I_C = 0	—	—	0.1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)\,CEO}$	I_C = 10 mA, I_B = 0	10	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)\,EBO}$	I_E = 1 mA, I_C = 0	6	—	—	V
DC Current Gain	$h_{FE\,(1)}$ (Note 2)	V_{CE} = 1 V, I_C = 0.5 A	140	—	600	
	$h_{FE\,(2)}$	V_{CE} = 1 V, I_C = 2 A	70	200	—	
Collector-Emitter Sturation Voltage	$V_{CE\,(sat)}$	I_C = 2 A, I_B = 50 mA	—	0.2	0.5	V
Base-Emitter Voltage	V_{BE}	V_{CE} = 1 V, I_C = 2 A	—	0.86	1.5	V
Transition Frequency	f_T	V_{CE} = 1 V, I_C = 0.5 A	—	150	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz	—	27	—	pF

(Note 2) : $h_{FE\,(1)}$ Classification L : 140~240, M : 200~330, N : 300~450, P : 420~600

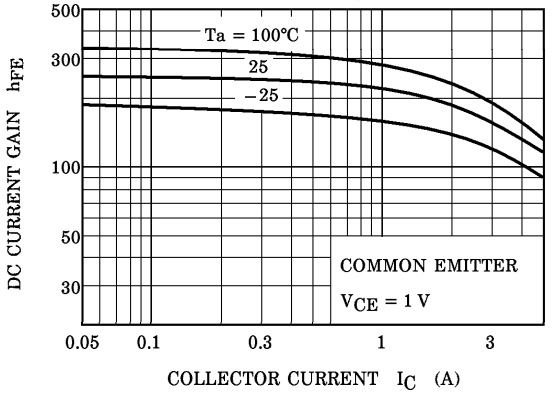
I_C – V_{CE}



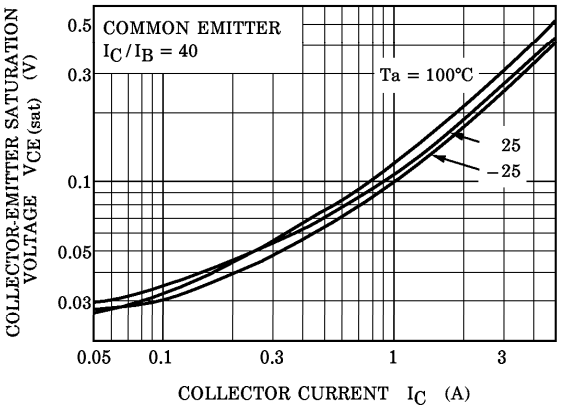
I_C – V_{BE}



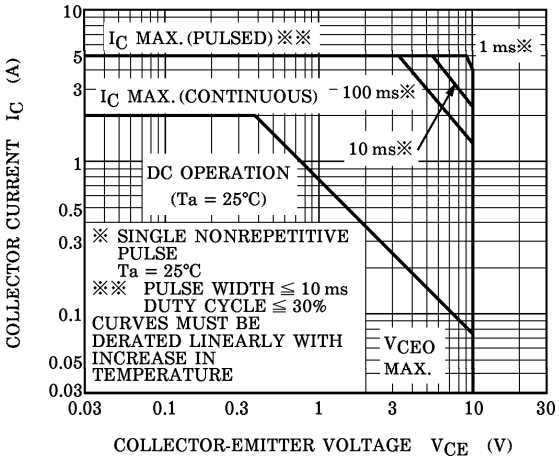
h_{FE} – I_C



$V_{CE\,(sat)}$ – I_C



SAFE OPERATING AREA



P_C – Ta