TBC337
TBC338

SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

PRIMARILY INTENDED FOR USE IN DRIVER AND OUTPUT STAGE OF AUDIO AMPLIFIERS.

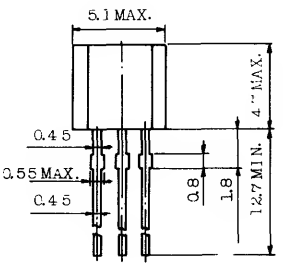
PNP COMPLEMENTS ARE TBC327 AND TBC328.

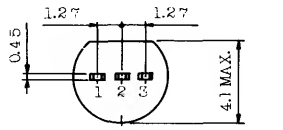
FEATURES:

. High V_{CEO} : 45V (TBC337)
25V (TBC338)

. Low Saturation Voltage
: $V_{CE(sat)}$=0.7V (Max.) at I_C=500mA

Unit in mm





1. COLLECTOR
2. BASE
3. EMITTER

JEDEC	TO-92
EIAJ	SC-43
TOSHIBA	2-5F1G

Weight : 0.21g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Breakdown Voltage	TBC337	$V_{(BR)CBO}$	50	V
	TBC338		30	
Collector-Emitter Breakdown Voltage	TBC337	$V_{(BR)CEO}$	45	V
	TBC338		25	
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	5	V
Collector Current	DC	I_C	500	mA
	Peak	I_{CP}	1000	
Base Current (DC)		I_B	100	mA
Collector Power Dissipation		P_C	625	mW
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}=20V, I_E=0	-	-	100	nA
Emitter Cut-off Current		I_{EBO}	V_{EB}=5V, I_C=0	-	-	10	μA
Collector-Emitter Breakdown Voltage	TBC337	$V_{(BR)CEO}$	I_C=10mA, I_B=0	45	-	-	V
	TBC338			25	-	-	
DC Current Gain		$h_{FE(1)}$ (Note)	V_{CE}=1V, I_C=100mA	100	-	400	
		$h_{FE(2)}$	V_{CE}=1V, I_C=500mA	40	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=500mA, I_B=50mA	-	-	0.7	V
Base-Emitter Voltage		V_{BE}	V_{CE}=1V, I_C=500mA	-	-	1.2	V
Transition Frequency		f_T	V_{CE}=5V, I_C=10mA, f=35MHz	-	100	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=10V, f=1MHz	-	12	-	pF

Note: $h_{FE(1)}$ Classification 337-A , 338-A : 100 ∿ 250
337-B , 338-B : 160 ∿ 400