

BC337/338

SILICON NPN EPITAXIAL TYPE

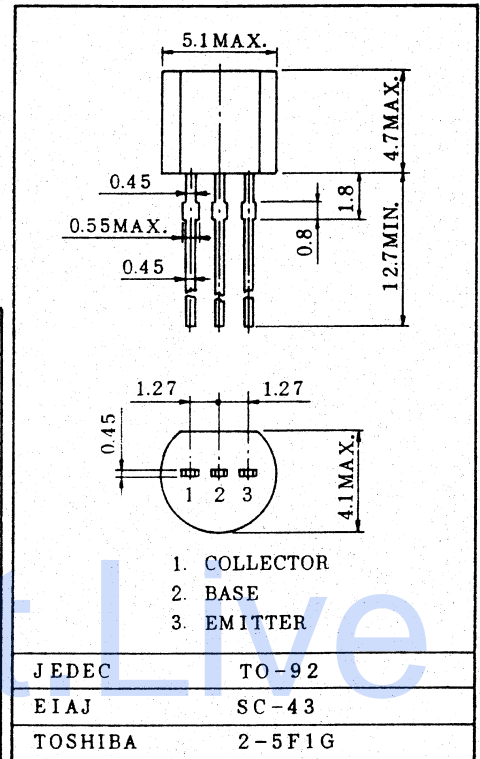
PRIMARILY INTENDED FOR USE IN DRIVER AND
OUTPUT STAGE OF AUDIO AMPLIFIERS.
PNP COMPLEMENTS ARE TBC327 AND TBC328.

- . High V_{CE0} : 45V (TBC337)
25V (TBC338)
- . Low Saturation Voltage
: $V_{CE(sat)}=0.7V(\text{Max.})$ at $I_C=500\text{mA}$

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

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	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-65~150	$^\circ\text{C}$

Unit in mm



Weight : 0.21g

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

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	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45	-	-	V
	TBC338			25	-	-	
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=1V, I_C=100\text{mA}$	100	-	600		
	$h_{FE(2)}$	$V_{CE}=1V, I_C=500\text{mA}$	40	-	-		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	-	0.7	V	
Base-Emitter Voltage	V_{BE}	$V_{CE}=1V, I_C=500\text{mA}$	-	-	1.2	V	
Transition Frequency	f_T	$V_{CE}=5V, I_C=10\text{mA}, f=35\text{MHz}$	-	100	-	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, f=1\text{MHz}$	-	12	-	pF	

Note: $h_{FE(1)}$ Classification 337-16, 338-16 : 100~250, 338-40 : 250~600
337-25, 338-25 : 160~400

