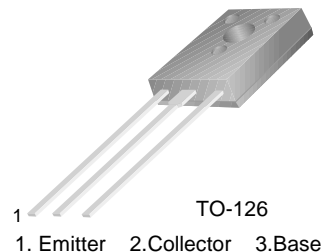


**■ ■ APPLICATION:** Low Frequency Power Amplifier Applications.

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

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	$V_{CBO}$	-120	V
Collector-emitter voltage	$V_{CEO}$	-120	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-1	A
Power Dissipation( $T_a=25^\circ\text{C}$ )	$P_C$	1	W
Power Dissipation( $T_c=25^\circ\text{C}$ )	$P_C$	8	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$


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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Common Emitter DC Current Gain	$h_{FE1}$	60		320		$V_{CE} = -5V, I_C = -50mA$
	$h_{FE2}$	20				$V_{CE} = -5V, I_C = -500mA$
Collector Cut-off Current	$I_{CBO}$			-1	$\mu A$	$V_{CB} = -50V, I_E = 0$
Emitter Cut-off Current	$I_{EBO}$			-1	$\mu A$	$V_{EB} = -4V, I_C = 0$
Collector-Base Breakdown Voltage	$BV_{CBO}$	-120			V	$I_C = -0.01mA, I_E = 0$
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	-120			V	$I_C = -1mA, I_B = 0$
Emitter-Base Breakdown Voltage	$BV_{EBO}$	-5			V	$I_E = -0.01mA, I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.15	-0.4	V	$I_C = -500mA, I_B = -50mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.85	-1.2	V	$I_C = -500mA, I_B = -50mA$
Gain bandwidth product	$f_T$	50	110		MHz	$I_C = -50mA, V_{CE} = -10V$
Output Capacitance	$C_{ob}$		30		pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$
Turn-on Time	$t_f$		80		ns	$V_{CE} = -12V, P_w = 20 \mu s$ $I_C = 10I_{B1} = -10I_{B2} = -500 mA$
Turn-off Time	$t_{off}$		100		ns	
Storage Time	$t_{stg}$		600		ns	

**■ ■  $h_{FE}$  Classification And Marking**

Classification	D	E	F
$h_{FE1}$	60~120	100~200	160~320