

NPN SILICON EPITAXIAL TRANSISTOR  
FOR LOW-FREQUENCY POWER AMPLIFIERS

FEATURES

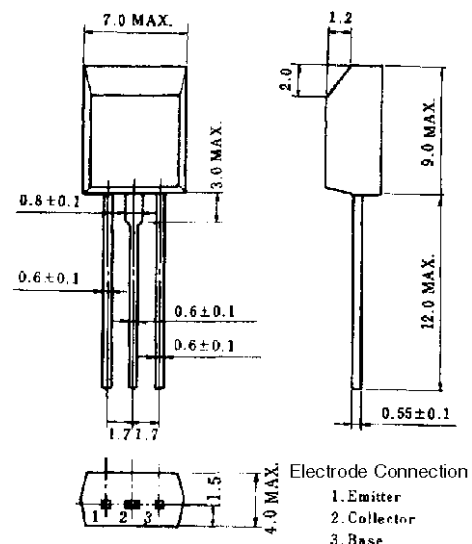
- Ideal for use of high voltage current such as TV vertical deflection (drive and output), audio output, pin cushion correction
- Complementary transistor with 2SA1221 and 2SA1222  
 $V_{CE0} = 140\text{ V}$ : 2SA1221/2SC2958  
 $V_{CE0} = 160\text{ V}$ : 2SA1222/2SC2959

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

Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CB0}$	160	V
Collector to emitter voltage	$V_{CE0}$	140/160	V
Emitter to base voltage	$V_{EB0}$	5.0	V
Collector current (DC)	$I_{C(DC)}$	500	mA
Collector current (pulse)	$I_{C(pulse)^*}$	1.0	A
Total power dissipation	$P_T$	1.0	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\*  $PW \leq 10\text{ ms}$ , duty cycle  $\leq 50\%$

PACKAGE DRAWING (UNIT: mm)



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

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 100\text{ V}$ , $I_E = 0$			200	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5.0\text{ V}$ , $I_C = 0$			200	nA
DC current gain	$h_{FE}^{**}$	$V_{CE} = 2.0\text{ V}$ , $I_C = 100\text{ mA}$	100	150	400	
DC base voltage	$V_{BE}^{**}$	$V_{CE} = 5.0\text{ V}$ , $I_C = 20\text{ mA}$	0.6	0.64	0.7	V
Collector saturation voltage	$V_{CE(sat)}^{**}$	$I_C = 1.0\text{ A}$ , $I_B = 0.2\text{ A}$		0.32	0.7	V
Base saturation voltage	$V_{BE(sat)}^{**}$	$I_C = 1.0\text{ A}$ , $I_B = 0.2\text{ A}$		1.1	1.3	V
Output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}$ , $I_E = 0$ , $f = 1.0\text{ MHz}$		13	30	pF
Gain bandwidth product	$f_r$	$V_{CE} = 10\text{ V}$ , $I_E = -20\text{ mA}$	30	60		MHz

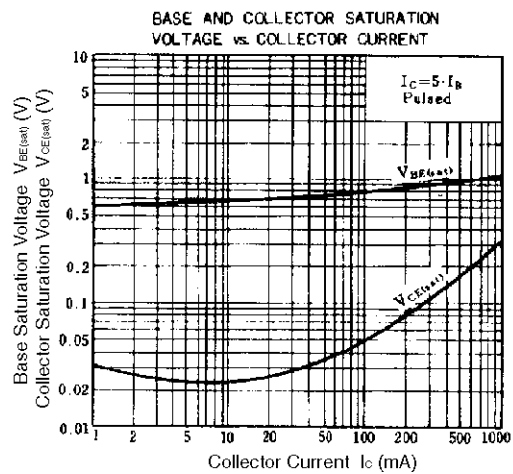
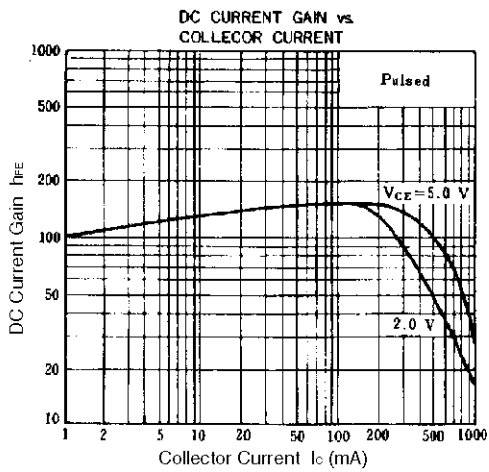
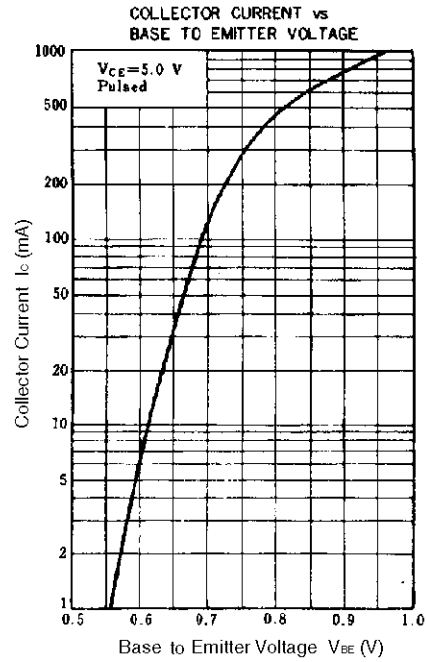
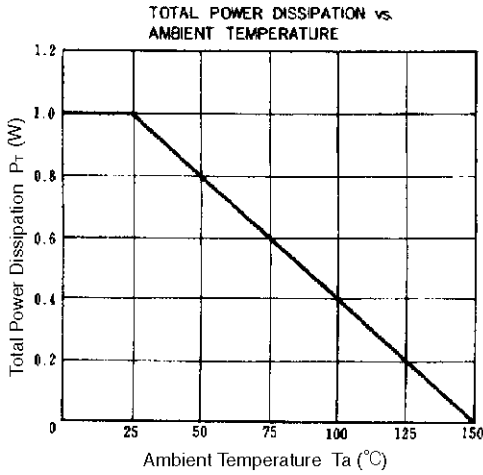
\*\* Pulse test  $PW \leq 350\ \mu\text{s}$ , duty cycle  $\leq 2\%$  per pulsed

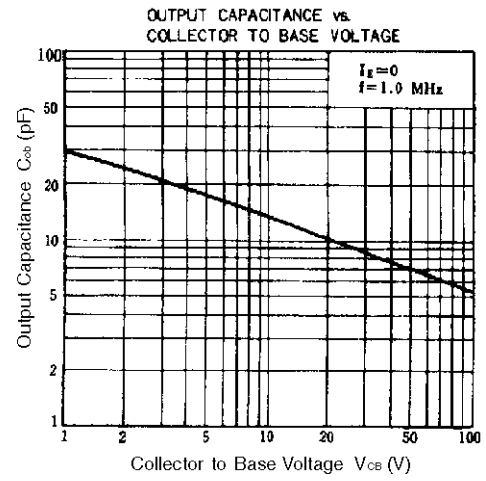
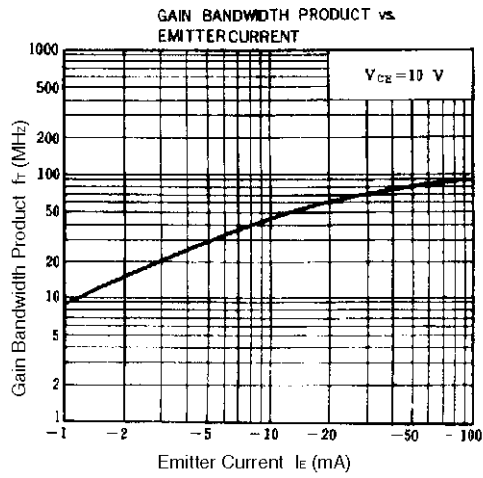
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**hFE CLASSIFICATION**

Marking	M	L	K
hFE	100 to 200	160 to 320	200 to 400

**TYPICAL CHARACTERISTICS (Ta = 25°C)**





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