

NPN SILICON EPITAXIAL TRANSISTOR
FOR LOW-FREQUENCY POWER AMPLIFIERS

FEATURES

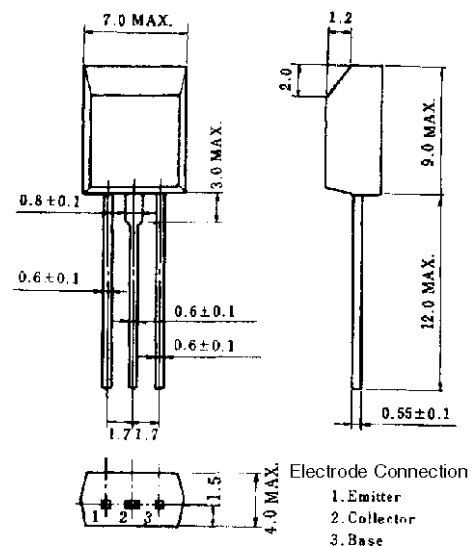
- Ideal for use of high voltage current such as TV vertical deflection (drive and output), audio output, pin cushion correction
- Complementary transistor with 2SA1221 and 2SA1222
 $V_{CE0} = 140\text{ V}$: 2SA1221/2SC2958
 $V_{CE0} = 160\text{ V}$: 2SA1222/2SC2959

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

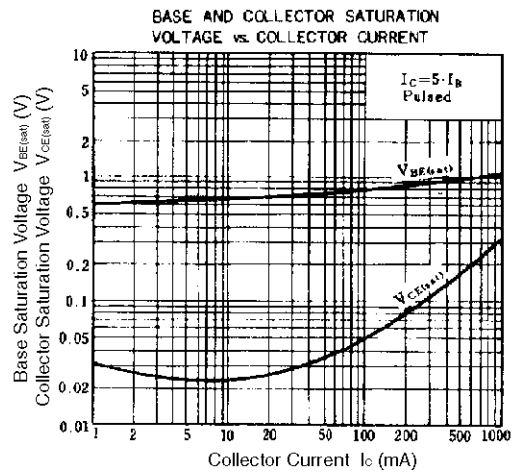
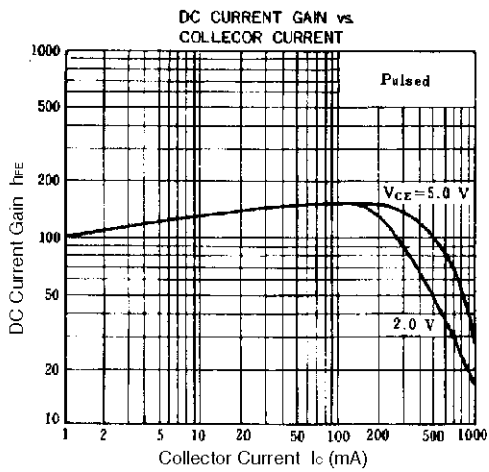
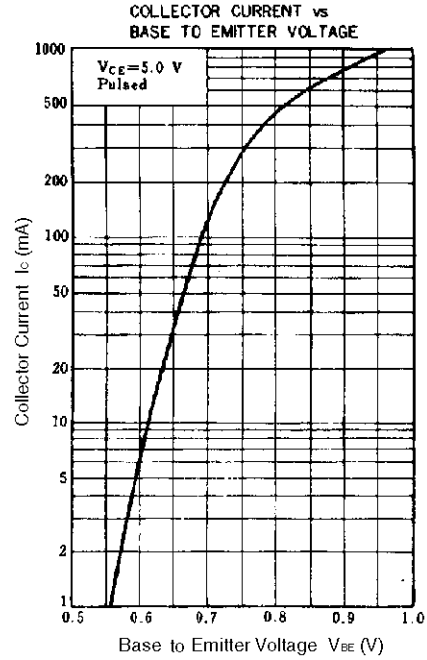
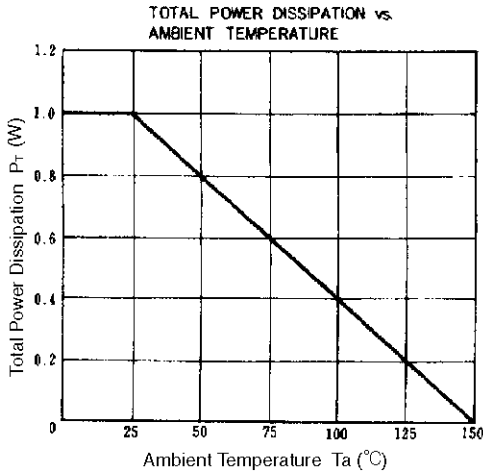
** Pulse test $PW \leq 350\ \mu\text{s}$, duty cycle $\leq 2\%$ per pulsed

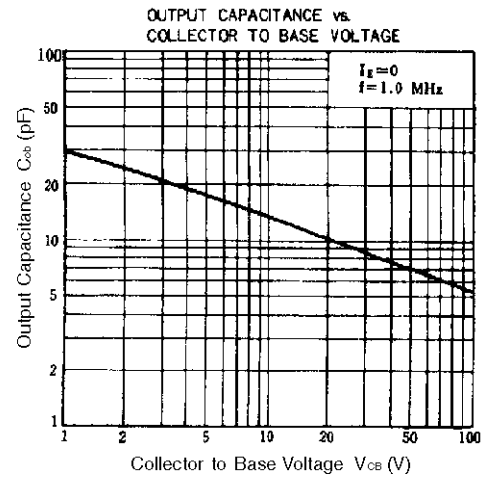
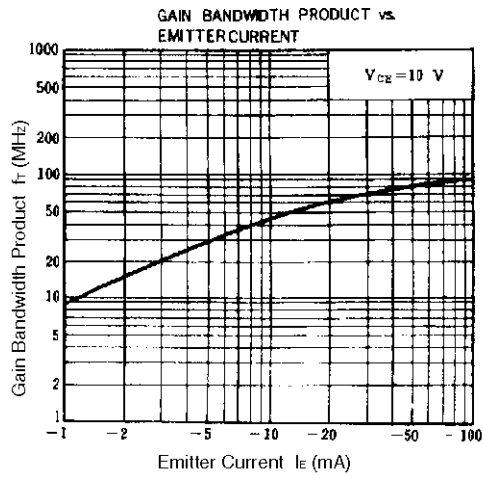
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hFE CLASSIFICATION

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

TYPICAL CHARACTERISTICS (Ta = 25°C)





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