

MICRO ELECTRONIC

NPN
SILICON
TRANSISTOR

DESCRIPTION

C1874 is NPN silicon planar epitaxial transistor for use in AF driver and output stages.

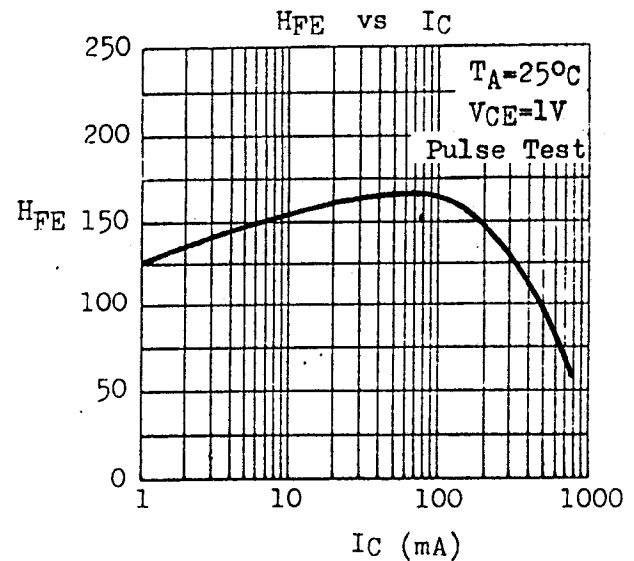
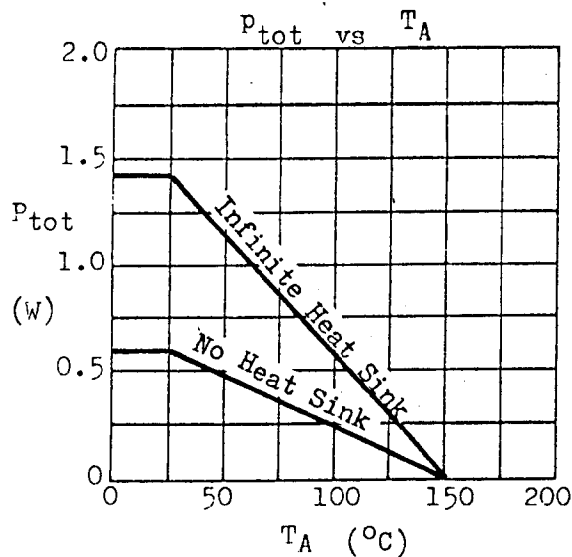
CASE TO-92F



ABSOLUTE MAXIMUM RATINGS

Collector-Emitter Voltage ($V_{EB}=0$)
Collector-Emitter Voltage ($I_B=0$)
Emitter-Base Voltage
Collector Current
Continuous Power Dissipation
Operating & Storage Junction Temperature

V_{CEO}	45V
V_{CES}	50V
V_{EBO}	5V
I_C	800mA
P_d	625mW
T_j, T_{stg}	-55 to +150°C



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Mar-97

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Collector-Emitter Breakdown Voltage	BV_{CES}	50			V	$I_C=0.1\text{mA}$ $V_{BE}=0$
Collector-Emitter Breakdown Voltage	$LV_{CEO} *$	45			V	$I_C=10\text{mA}$ $I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	5			V	$I_E=0.1\text{mA}$ $I_C=0$
Collector Cutoff Current	IC_{ES}			100	nA	$V_{CES}=45\text{V}$
					nA	$V_{CES}=25\text{V}$
				10	μA	$V_{CES}=45\text{V}$ $T_A=125^{\circ}\text{C}$
					μA	$V_{CES}=25\text{V}$ $T_A=125^{\circ}\text{C}$
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat}) *$		0.5		V	$I_C=500\text{mA}$ $I_B=10\text{mA}$
Base-Emitter Voltage	$V_{BE} *$		1.2		V	$I_C=300\text{mA}$ $V_{CE}=1\text{V}$
D.C. Current Gain	$H_{FE} *$	100	250			$I_C=100\text{mA}$ $V_{CE}=1\text{V}$
						40
Current Gain-Bandwidth Product	f_T		100		MHz	$I_C=10\text{mA}$ $V_{CE}=5\text{V}$
Collector-Base Capacitance	C_{ob}		10		pF	$V_{CB}=10\text{V}$ $I_E=0$ $f=1\text{MHz}$

* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%