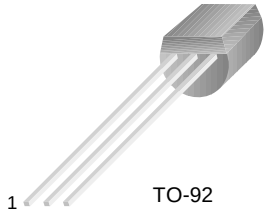
FAIRCHILD
SEMICONDUCTOR®

FJN5471

For Output Amplifier of Electronic Flash Unit

- High DC Currrent Gain
- Low Collector-Emitter Saturation Voltage
- High Performance at Low Supply Voltage



TO-92

1. Emitter 2. Collector 3. Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Ratings	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	5	A
P_C	Collector Dissipation	0.75	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Voltage	I_C=1mA, I_B=0	20			V
BV_{EBO}	Emitter Base Voltage	I_C=100μA, I_C=0	7			V
I_{CBO}	Collector Cut-off Current	V_{CB}=10V, I_E=0			0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB}=7V, I_C=0			0.1	μA
h_{FE}	DC Current Gain	V_{CE}=2V, I_C=0.5A	700	1000		
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=3A, I_B=0.1A			0.5	V
V_{BE} (sat)	Base-Emitter Saturation Voltage	I_C=3A, I_B=0.1A			1.5	V
f_T	Current Gain Band Width Product	V_{CE}=6V, I_C=50mA		150		MHz
C_{ob}	Collector Output Capacitance	V_{CB}=20V, I_E=0, f=1MHz		25		pF

Thermal Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Max	Units
$R_{\theta jA}$	Thermal Resistance, Junction to Ambient	165	°C/W

Typical Characteristics

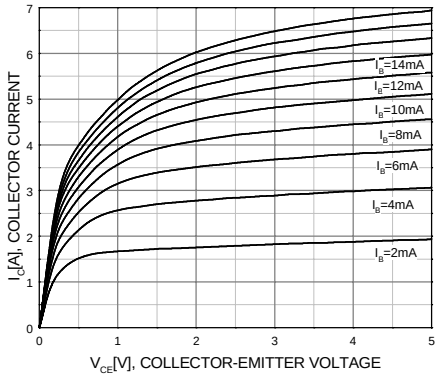


Figure 1. Static Characteristic

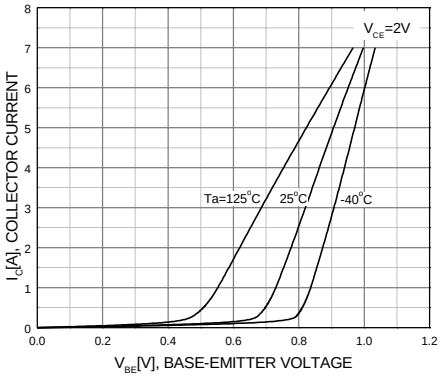


Figure 2. Base-Emitter On Voltage

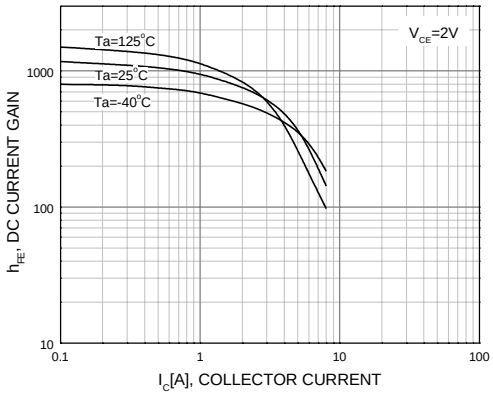


Figure 3. DC current Gain

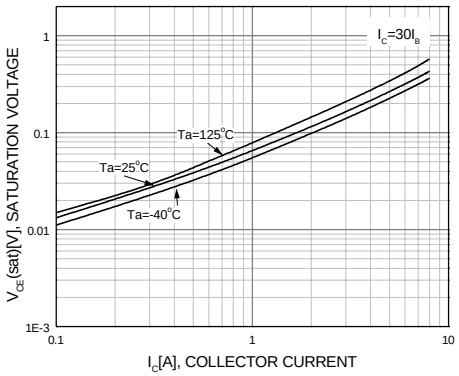


Figure 4. Collector-Emitter Saturation Voltage

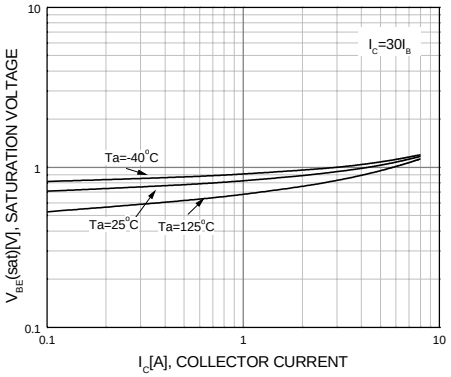


Figure 5. Base-Emitter On Voltage

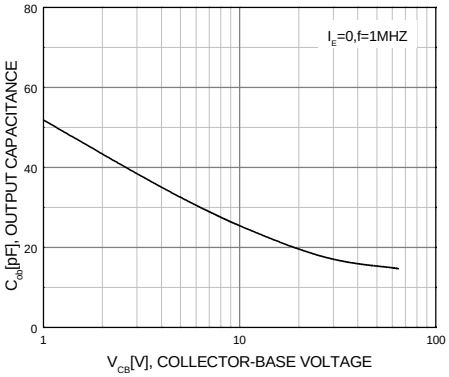


Figure 6. Collector Output Capacitance

Typical Characteristics (Continued)

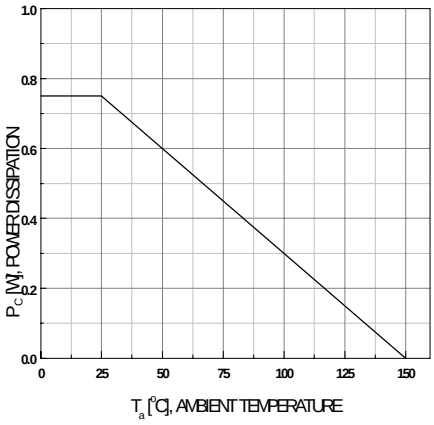


Figure 7. Power Derating

Package Dimensions

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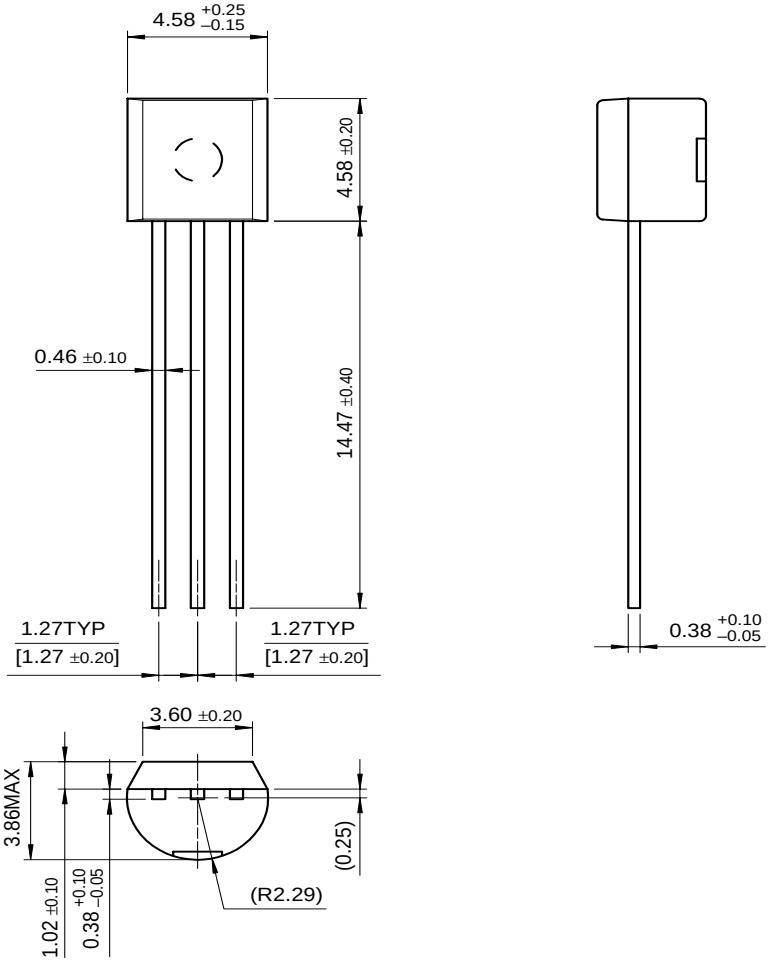

Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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