

Silicon PNP Power Transistors

2SA1443

DESCRIPTION

- With TO-220Fa package
- Low collector saturation voltage
- Fast switching speed
- High DC current gain

APPLICATIONS

- High speed power switching applications

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector
3	Base

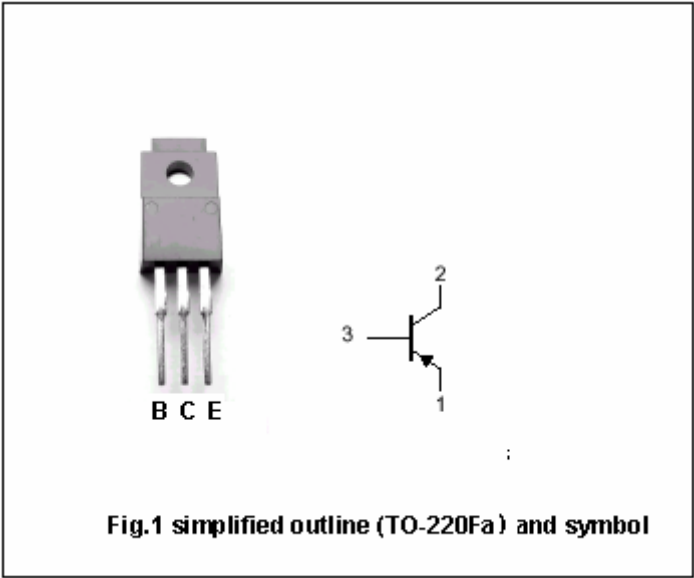


Fig.1 simplified outline (TO-220Fa) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-100	V
V_{CEO}	Collector-emitter voltage	Open base	-60	V
V_{EBO}	Emitter-base voltage	Open collector	-7	V
I_C	Collector current		-10	A
I_{CM}	Collector current-peak		-20	A
I_B	Base current		-5	A
P_C	Collector power dissipation	$T_C=25^{\circ}C$	30	W
		$T_a=25^{\circ}C$	2	
T_j	Junction temperature		150	$^{\circ}C$
T_{stg}	Storage temperature		-55~150	$^{\circ}C$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	I _C =-6A, I _B =-0.6A; L=1mH	-60			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =-6A, I _B =-0.3A			-0.3	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =-8A, I _B =-0.4A			-0.5	V
V _{BESat-1}	Base-emitter saturation voltage	I _C =-6A, I _B =-0.3A			-1.2	V
V _{BESat-2}	Base-emitter saturation voltage	I _C =-8A, I _B =-0.4A			-1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =-60V, I _E =0			-10	μ A
I _{CEX}	Collector cut-off current	V _{CE} =-60V, V _{BE} =1.5V T _a =125°C			-10 -1.0	μ A mA
I _{EBO}	Emitter cut-off current	V _{EB} =-5V; I _C =0			-10	μ A
h _{FE-1}	DC current gain	I _C =-1A; V _{CE} =-2V	100			
h _{FE-2}	DC current gain	I _C =-2A; V _{CE} =-2V	100		400	
h _{FE-3}	DC current gain	I _C =-6A; V _{CE} =-2V	60			
C _{ob}	Output capacitance	I _E =0; V _{CB} =-10V, f=1MHz		230		pF
f _T	Transition frequency	I _C =-1A; V _{CE} =-10V		80		MHz

Switching times

t _{on}	Turn-on time	I _C =-6A; R _L =8.3 Ω I _{B1} =- I _{B2} =-0.3A V _{CC} ≈-50V			0.3	μ s
t _s	Storage time				1.5	μ s
t _f	Fall time				0.3	μ s

◆ h_{FE-2} Classifications

M	L	K
100-200	150-300	200-400

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PACKAGE OUTLINE

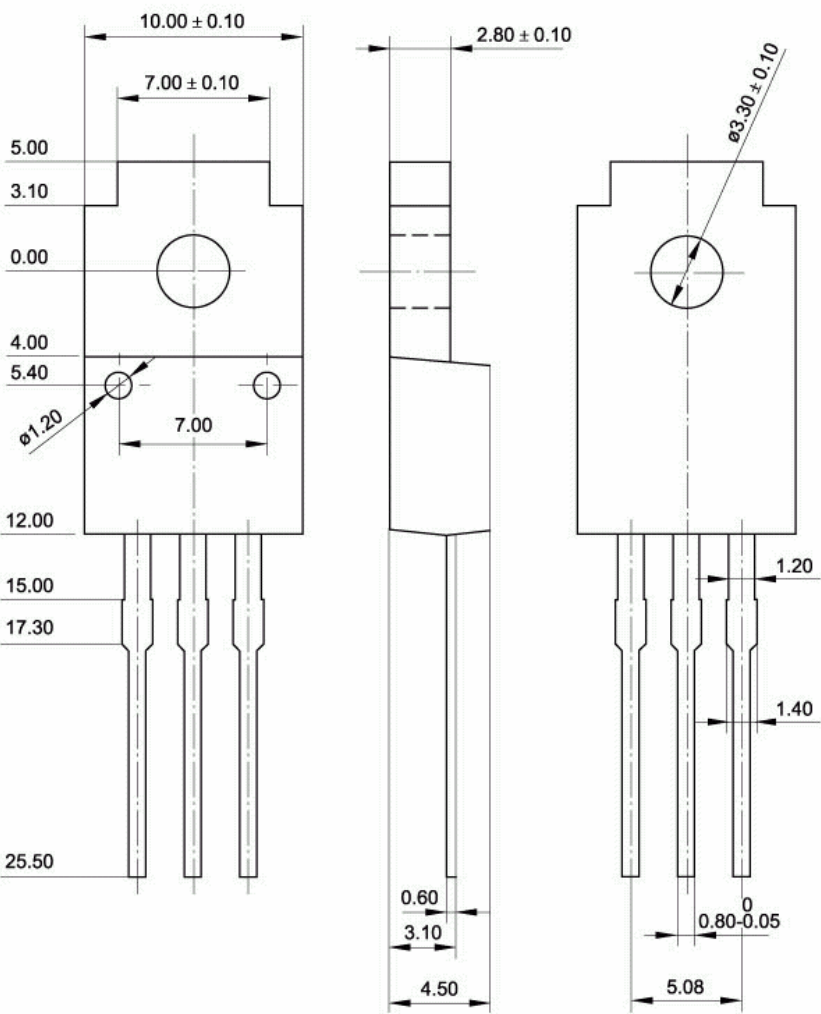


Fig.2 Outline dimensions (unindicated tolerance:±0.15 mm)