

SPTECH Silicon PNP Power Transistor**2SA1307****DESCRIPTION**

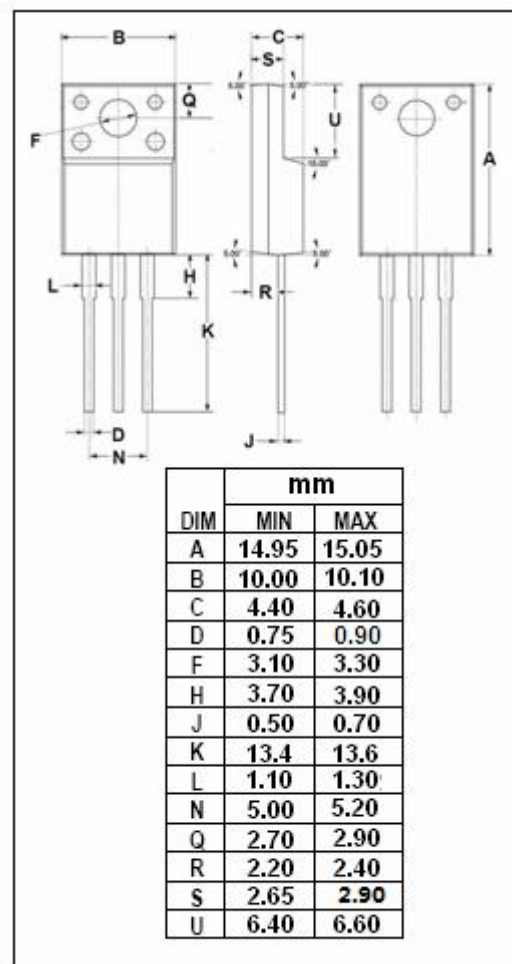
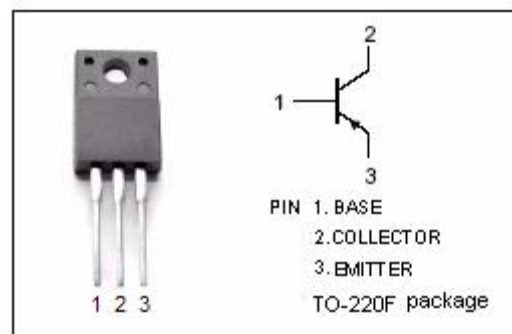
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = -0.4V(\text{Max.}) @ I_C = -3A$
- High Switching Speed
- Complement to Type 2SC3299

APPLICATIONS

- Designed for high current switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-5	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	20	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



SPTECH Silicon PNP Power Transistor**2SA1307****ELECTRICAL CHARACTERISTICS****T_j=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = -10mA; I _B = 0	-50			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -3A; I _B = -0.15A			-0.4	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -3A; I _B = -0.15A			-1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -50V; I _E = 0			-1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-1.0	μ A
h _{FE-1}	DC Current Gain	I _C = -1A; V _{CE} = -1V	70		240	
h _{FE-2}	DC Current Gain	I _C = -3A; V _{CE} = -1V	30			
f _T	Current-Gain—Bandwidth Product	I _C = -1A; V _{CE} = -4V		60		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = -10V; f= 1MHz		170		pF

Switching Times

t _{on}	Turn-On Time	I _{B1} = -I _{B2} = -0.15A; V _{CC} = -30V; R _L = 10 Ω ; Duty Cycle ≤ 1%		0.1		μ s
t _{stg}	Storage Time			1.0		μ s
t _f	Fall Time			0.1		μ s

◆ h_{FE-1} Classifications

O	Y
70-140	120-240