

深圳市晶泰源电子有限公司

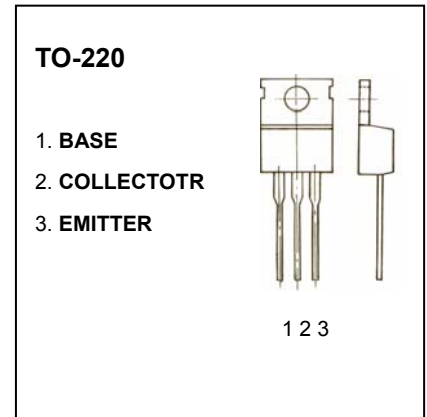
2SA1012 TRANSISTOR (PNP)

FEATURES

- HIGH CURRENT SWITCHING APPLICATIONS.
- Low Collector Saturation Voltage
: $V_{CE(SAT)} = -0.4V(MAX)$ at $I_C = -3A$
- High Speed Switching Time : $t_{stg} = 1.0us$ (Typ.)
- Complementary to 2SC2562

MAXIMUM RATINGS ($T_A=25^\circ C$ unless otherwise noted)

Symbol	Parameter	Value	Units
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
P_C	Collector Power Dissipation	2	W
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55-150	$^\circ C$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -1mA, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -1V, I_C = -1A$	70		240	
	$h_{FE(2)}$ *	$V_{CE} = -1V, I_C = -3A$	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	$I_C = -3A, I_B = 150mA$		-0.2	-0.4	V
Base-emitter saturation voltage	$V_{BE(SAT)}$	$I_C = -3A, I_B = 150mA$		-0.9	-1.2	V
Transition frequency	f_T	$V_{CE} = -4V, I_C = -1A$		60		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		170		pF
Switching time	Turn-on Time	t_{on}	$V_{CC} = -30V, I_C = -3A, I_{B1} = -I_{B2} = -0.15A$	0.1		us
	Storage Time	t_{stg}		1.0		
	Fall Time	t_f		0.1		

*Pulse test: $t_p \leq 300\mu S, \delta \leq 0.02$.

CLASSIFICATION OF h_{FE}

Rank	O	Y
Range	70-140	120-240