CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SMALL FLAT
NPN Epitaxial Transistor
VOLTAGE 100 Volts CURRENT 3 Amperes

4N1815PGP

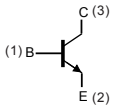
APPLICATION
* High current amplifier.

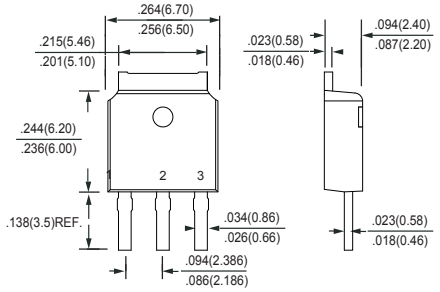
FEATURE
* Small flat package. (TO-251S)
* Low Collector-to-Emitter Saturation Voltage

CONSTRUCTION
* NPN Cilicon Transistor

TO-251S

CIRCUIT





1 Base
2 Collector
3 Emitter

Dimensions in inches and (millimeters)

TO-251S

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	CONDITION	SYMBOL	4N1815PGP	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	120	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	100	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	6	Volts
Collector Current DC		I_C	3	Amps
Total Power Dissipation	$T_A \leq 25^oC$	P_{TOT}	1.0	W
Storage Temperature		T_{STG}	-55 to +150	°C
Junction Temperature		T_J	+150	°C

2012-12

ELECTRICAL CHARACTERISTIC (4N1815PGP)

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	120			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=100V, I_E=0			1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=500mA	70		400	
	$h_{FE(2)}$	V_{CE}=5V, I_C=2A	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1.5A, I_B=150mA			0.4	V
Base **-emitter saturation voltage**	$V_{BE(sat)}$	I_C=1.5A, I_B=150mA			1.2	V
Transition frequency	f_T	V_{CE}=10V, I_C=500mA		180		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		25		pF
Turn-on time	t_{on}	V_{CC}=50V,I_C=1.5A, I_{B1}=-I_{B2}=-0.15A		100		nS
Storage time	t_S			900		nS
Fall time	t_f			50		nS

Note :

1. hFE Classification Q: 70 to 140, R: 100 to 200, S: 140 to 280, T: 200 to 400