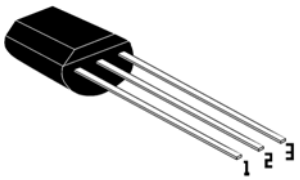
CHANG JIANG
ELECTRONICS CO., LTD.

2N4403

GENERAL PURPOSE TRANSISTOR

* Collector-Emitter Voltage：V_{CEO}=-40V
* Collector Dissipation：Pc=625 mW (Ta=25^{0}C)

TO-92



1：Emiter
2：Base
3：Collector

ABSOLUTE MAXIMUM RATINGS at Tamb=25^{0}C

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	Vcbo	-40	V
Collector-Emitter Voltage	Vceo	-40	V
Emitter-Base Voltage	Vebo	-5	V
Collector Current	Ic	-600	mA
Collector Dissipation	Pc	625	mW
Junction Temperature	Tj	150	^{0}C
Storage Temperature	Tstg	-55~150	^{0}C

ELECTRICAL CHARACTERISTICS at Tamb=25^{0}C

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BVcbo	-40			V	Ic=-100uA Ie=0
Collector-Emitter Breakdown Voltage	BVceo	-40			V	Ic=-1mA Ib=0
Emitter-Base Breakdown Voltage	BVebo	-5			V	Ie=-100uA Ic=0
Collector Cutoff Current	Icex			-100	nA	Vce=-35V Veb=-0.4V
DC Current Gain	Hfe_1	30				Vce=-1V Ic=-0.1mA
DC Current Gain	Hfe_2	60				Vce=-1V Ic=-1mA
DC Current Gain	Hfe_3	100				Vce=-1V Ic=-10mA
DC Current Gain	Hfe_4	100		300		Vce=-1V Ic=-150mA
DC Current Gain	Hfe_5	20				Vce=-2V Ic=-500mA
Collector-Emitter Saturation Voltage	Vce(sat)			-0.40	V	Ic=-150mA Ib=-15mA
Collector-Emitter Saturation Voltage	Vce(sat)			-0.75	V	Ic=-500mA Ib=-50mA
Base-Emitter Saturation Voltage	Vbe(sat)	0.75		-0.95	V	Ic=-150mA Ib=-15mA
Base-Emitter Saturation Voltage	Vbe(sat)			-1.30	V	Ic=-500mA Ib=-50mA
Output Capacitance	Cob			6.50	pF	Vcb=-5V Ie=0 f=100MHz
Current Gain-Bandwidth Product	fT	200			MHz	Vce=-10V Ic=-20mA f=100MHz
Collector-Base Capacitance	Ccb			8.5	pF	Vcb=-10V Ie=0 f=140kHz
Emitter-Base Capacitance	Ceb			30	pF	Vbe=-0.5V Ic=0 f=140kHz
Input Impedance	hie	1.5		15	Kohm	Ic=-1mA Vce=-10V f=1kHz
Voltage Feedback Ratio	hre	0.1		8	$*10^{-4}$	Ic=-1mA Vce=-10V f=1kHz
Small-Signal Current Gain	hfe	60		500		Ic=-1mA Vce=-10V f=1kHz
Output Admittance	hoe	1		100	umhos	Ic=-1mA Vce=-10V f=1kHz
Delay Time	td			15	ns	Vcc=-30V Ic=-150mA Ib1=-15mA
Rise Time	tr			20	ns	
Storage Time	ts			225	ns	Vcc=-30V Ic=-150mA Ib1=Ib2=-15mA
Fall Time	tf			30	ns	