



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-363 Plastic-Encapsulate Transistors

MMDT2227

Multi-Chip TRANSISTOR (NPN/PNP)

FEATURES

Power dissipation

P_{CM} : 200 mW ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 600/-600 mA

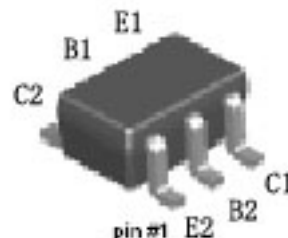
Collector-base voltage

$V_{(BR)CBO}$: 75/-60 V

Operating and storage junction temperature range

T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

SOT-363



NPN2222A ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	75			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			10	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=3V, I_C=0$			10	nA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=150mA$	100		300	
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=150mA, I_B=15mA$			0.3	V
	$V_{CE(sat)2}$	$I_C=500mA, I_B=50mA$			1	V
Base -emitter saturation voltage	$V_{BE(sat)1}$	$I_C=150mA, I_B=15mA$			1.2	V
	$V_{BE(sat)2}$	$I_C=500mA, I_B=50mA$			2	V
Transition frequency	f_T	$V_{CE}=20V, I_C=20mA, f=100MHz$	300			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			8	pF
Noise Figure	NF	$V_{CE}=10V, I_C=0.1mA, f=1KHZ, R_s=1K\Omega$			4	dB

PNP2907A ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA, I_B=0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-50V, I_E=0$			-10	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-3V, I_C=0$			-10	nA
DC current gain	h_{FE}	$V_{CE}=-10V, I_C=-150mA$	100		300	
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=-150mA, I_B=-15mA$			-0.4	V
	$V_{CE(sat)2}$	$I_C=-500mA, I_B=-50mA$			-1.6	V
Base -emitter saturation voltage	$V_{BE(sat)1}$	$I_C=-150mA, I_B=-15mA$			-1.3	V
	$V_{BE(sat)2}$	$I_C=-500mA, I_B=-50mA$			-2.6	V
Transition frequency	f_T	$V_{CE}=-20V, I_C=-50mA, f=100MHz$	200			MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$			8	pF