

Plastic-Encapsulate Transistors

DUAL TRANSISTOR (NPN+PNP)

FEATURE

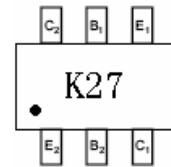
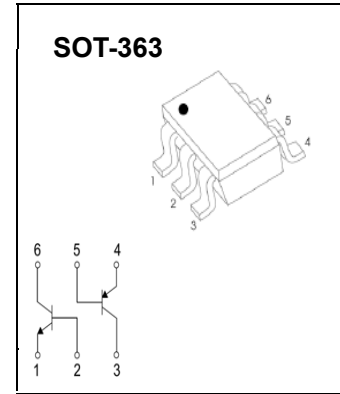
- Epitaxial planar die construction
- One 2222A NPN
One 2907A PNP
- Ideal for power amplification and switching

MARKING: K27

NPN 2222A

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Power Dissipation	200	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$



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

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB} = 60\text{V}, I_E = 0$		10	nA
Collector cut-off current	I_{CEX}	$V_{CE} = 60\text{V}, V_{EB(off)} = 3\text{V}$		10	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3\text{V}, I_C = 0$		10	nA
DC current gain	$h_{FE(1)}$ *	$V_{CE} = 10\text{V}, I_C = 0.1\text{mA}$	35		
	$h_{FE(2)}$ *	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	50		
	$h_{FE(3)}$ *	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	75		
	$h_{FE(4)}$ *	$V_{CE} = 10\text{V}, I_C = 150\text{mA}$	100	300	
	$h_{FE(5)}$ *	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	40		
	$h_{FE(6)}$ *	$V_{CE} = 1\text{V}, I_C = 150\text{mA}$	35		
Collector-emitter saturation voltage	$V_{CE(sat)1}$ *	$I_C = 150\text{mA}, I_B = 15\text{mA}$		0.3	V
	$V_{CE(sat)2}$ *	$I_C = 500\text{mA}, I_B = 50\text{mA}$		1	V
Base-emitter saturation voltage	$V_{BE(sat)1}$ *	$I_C = 150\text{mA}, I_B = 15\text{mA}$	0.6	1.2	V
	$V_{BE(sat)2}$ *	$I_C = 500\text{mA}, I_B = 50\text{mA}$		2	V
Transition frequency	f_T	$V_{CE} = 20\text{V}, I_C = 20\text{mA}, f = 100\text{MHz}$	300		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		8	pF
Input Capacitance	C_{ib}	$V_{EB} = 0.5\text{V}, I_C = 0, f = 1\text{MHz}$		25	pF
Noise Figure	NF	$V_{CE} = 10\text{V}, I_C = 100\mu\text{A}, f = 1\text{KHz}, R_s = 1\text{K}\Omega$		4	dB

Epulse test

Switching characteristics

Parameter	Symbol	Test conditions	Min	Max	Unit
Delay time	t_d	$V_{CC}=30V, I_C=150mA,$ $V_{BE(off)}=0.5V, I_{B1}=15mA$		10	ns
Rise time	t_r			25	ns
Storage time	t_s			225	ns
Fall time	t_f			60	ns

PNP 2907A

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	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-600	mA
P_C	Collector Power Dissipation	200	mW
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55-150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	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
Collector cut-off current	I_{CEX}	$V_{CE} = -30V, V_{EB(off)} = -0.5V$		-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3V, I_C = 0$		-10	nA
DC current gain	$h_{FE(1)}^*$	$V_{CE} = -10V, I_C = -0.1mA$	75		
	$h_{FE(2)}^*$	$V_{CE} = -10V, I_C = -1mA$	100		
	$h_{FE(3)}^*$	$V_{CE} = -10V, I_C = -10mA$	100		
	$h_{FE(4)}^*$	$V_{CE} = -10V, I_C = -150mA$	100	300	
	$h_{FE(5)}^*$	$V_{CE} = -10V, I_C = -500mA$	50		
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
Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		8	pF
Input Capacitance	C_{ib}	$V_{EB} = -2V, I_C = 0, f = 1MHz$		30	pF
Delay time	t_d	$V_{CC} = -30V, I_C = -150mA, I_{B1} = -15mA$		10	ns
Rise time	t_r			40	ns
Storage time	t_s			225	ns
Fall time	t_f			60	ns

*pulse test

SOT-363-Package Outline Dimensions

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Bipolar Transistors - BJT category](#):

Click to view products by [Hong Kong Chuangji manufacturer](#):

Other Similar products are found below :

[BC559C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [NJVMJD148T4G](#) [NTE16](#) [NTE195A](#) [IMX9T110](#) [2N4401-A](#) [2N6728](#) [2SA1419T-TD-H](#) [2SB1204S-TL-E](#) [2SC5488A-TL-H](#) [FMC5AT148](#) [2N2369ADCSM](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC4618TLN](#) [CPH6501-TL-E](#) [BC856BW-13-F](#) [US6T6TR](#) [BAX18/A52R](#) [BC556/112](#) [IMZ2AT108](#) [MMST8098T146](#) [MCH6102-TL-E](#) [BC846B-13-F](#) [2N3879](#) [30A02MH-TL-E](#) [NTE13](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [JANTX2N2920L](#) [JANSR2N2907AUB](#) [CMLT3946EG TR](#) [SNSS40600CF8T1G](#) [CMLT3906EG TR](#) [GRP-DATA-JANS2N2907AUB](#) [GRP-DATA-JANS2N2222AUA](#) [MMDT3946FL3-7](#) [2N4240](#) [JANS2N3019](#) [MSB30KH-13](#) [2N2221AUB](#) [2SD1815T-TL-E](#) [2N6678](#) [2N2907Ae4](#)