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Manufacturers of World Class Discrete Semiconductors

2N5793

2N5794

NPN SILICON DUAL TRANSISTOR

JEDEC TO-78 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5793, 2N5794 types are silicon NPN dual transistors manufactured by the epitaxial planar process utilizing two individual chips mounted in a hermetically sealed metal case designed for differential amplifier applications.

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

	SYMBOL		UNIT
Collector-Base Voltage	V_{CB0}	75	V
Collector-Emitter Voltage	V_{CE0}	40	V
Emitter-Base Voltage	V_{EB0}	6.0	V
Collector Current	I_C	600	mA
Power Dissipation (one die)	P_D	500	mW
Power Dissipation (both dice)	P_D	600	mW
Power Dissipation (one die, $T_C=25^\circ\text{C}$)	P_D	1200	mW
Power Dissipation (both dice, $T_C=25^\circ\text{C}$)	P_D	2000	mW
Operating and Storage Junction Temperature	T_J, T_{STG}	-65 TO +200	$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	2N5793		2N5794		UNIT
		MIN	MAX	MIN	MAX	
I_{CB0}	$V_{CB}=50\text{V}$		10		10	nA
I_{EB0}	$V_{EB}=4.0\text{V}$		10		10	nA
I_{C1-C2}	$V_{IC-2C}=\pm 50\text{V}$		± 1.0		± 1.0	nA
BV_{CB0}	$I_C=10\mu\text{A}$	75		75		V
BV_{CE0}	$I_C=10\text{mA}$	40		40		V
BV_{EB0}	$I_E=10\mu\text{A}$	6.0		6.0		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.3		0.3	V
$V_{CE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$		0.9		0.9	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	0.6	1.2	0.6	1.2	V
$V_{BE(SAT)}$	$I_C=300\text{mA}, I_B=30\text{mA}$	-	1.8	-	1.8	V
h_{FE}	$V_{CE}=10\text{V}, I_C=100\mu\text{A}$	20	-	35	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	25	-	50	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	35	-	75	-	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=150\text{mA}$	20	-	50	-	
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	40	120	100	300	
h_{FE}	$V_{CE}=10\text{V}, I_C=300\text{mA}$	25	-	40	-	
f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	250		250		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		8.0		8.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=100\text{kHz}$		25		25	pF
t_{on}	$V_{CC}=30\text{V}, V_{BE(OFF)}=0.5\text{V}, I_C=150\text{mA}, I_{B1}=15\text{mA}$		40		40	ns
t_{off}	$V_{CC}=30\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$		300		300	ns