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Manufacturers of World Class Discrete Semiconductors

2N3734

2N3735

NPN SILICON TRANSISTORS

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3734, 2N3735 types are Silicon NPN Transistors in a hermetically sealed case designed for core driver and high speed switching applications.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

	SYMBOL	2N3734	2N3735	UNIT
Collector-Base Voltage	V _{CB0}	50	75	V
Collector-Emitter Voltage	V _{CE0}	30	50	V
Emitter-Base Voltage	V _{EB0}	5.0	5.0	V
Collector Current	I _C	1.5	1.5	A
Power Dissipation	P _D	1.0	1.0	W
Power Dissipation (T _C =25°C)	P _D	4.0	4.0	W
Operating and Storage Junction Temperature	T _J , T _{stg}	-65 TO +200		°C
Thermal Resistance	θ _{JA}	175	175	°C/W
Thermal Resistance	θ _{JC}	43.75	43.75	°C/W

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N3734		2N3735		UNIT
		MIN	MAX	MIN	MAX	
I _{CEV}	V _{CE} =25V, V _{EB} =2.0V		200	-	-	nA
I _{CEV}	V _{CE} =25V, V _{EB} =2.0V, T _A =100°C		20	-	-	μA
I _{CEV}	V _{CE} =40V, V _{EB} =2.0V		-	200	-	nA
I _{CEV}	V _{CE} =40V, V _{EB} =2.0V, T _A =100°C		-	20	-	μA
I _{BL}	V _{CE} =25V, V _{EB} =2.0V		300	-	-	nA
I _{BL}	V _{CE} =40V, V _{EB} =2.0V		-	300	-	nA
BV _{CB0}	I _C =10μA	50		75		V
BV _{CE0}	I _C =10mA	30		50		V
BV _{EB0}	I _E =10μA	5.0		5.0		V
V _{CE} (SAT)	I _C =10mA, I _B =1.0mA		0.2		0.2	V
V _{CE} (SAT)	I _C =150mA, I _B =15mA		0.3		0.3	V
V _{CE} (SAT)	I _C =500mA, I _B =50mA		0.5		0.5	V
V _{CE} (SAT)	I _C =1.0A, I _B =100mA		0.9		0.9	V
V _{BE} (SAT)	I _C =10mA, I _B =1.0mA		0.8		0.8	V
V _{BE} (SAT)	I _C =150mA, I _B =15mA		1.0		1.0	V
V _{BE} (SAT)	I _C =500mA, I _B =50mA		1.2		1.2	V
V _{BE} (SAT)	I _C =1.0A, I _B =100mA	0.9	1.4	0.9	1.4	V
h _{FE}	V _{CE} =1.0V, I _C =10mA	35		35		
h _{FE}	V _{CE} =1.0V, I _C =150mA	40		40		
h _{FE}	V _{CE} =1.0V, I _C =500mA	35		35		
h _{FE}	V _{CE} =1.5V, I _C =1.0A	30	120	20	80	
h _{FE}	V _{CE} =5.0V, I _C =1.5A	30		20		
f _T	V _{CE} =10V, I _C =50mA, f=100MHz	250		250		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=100kHz		9.0		9.0	pF
C _{ib}	V _{BE} =0.5V, I _C =0, f=100kHz		80		80	pF
t _{on}	V _{CC} =30V, V _{BE} (OFF)=2.0V, I _C =1.0A, I _{B1} =100mA		48		48	ns
t _{off}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA		60		60	ns
Q _T	V _{CC} =30V, I _C =1.0A, I _B =100mA		10		10	nC