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**COMPLEMENTARY SILICON
 POWER TRANSISTOR**

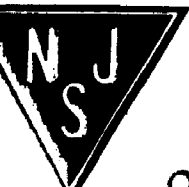
JEDEC TO-39 CASE

MAXIMUM RATINGS (T_C=25°C)

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	V _{CB0}	45	V
Collector-Emitter Voltage	V _{CER}	45	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EBO}	3.5	V
Collector Current	I _C	3.5	A
Base Current	I _B	1.0	A
Power Dissipation	P _D	10	W
Power Dissipation (T _A =25°C)	P _D	1.0	W
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 to +200	°C
Thermal Resistance	θ _{JC}	17.5	°C/W
Thermal Resistance	θ _{JA}	175	°C/W

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

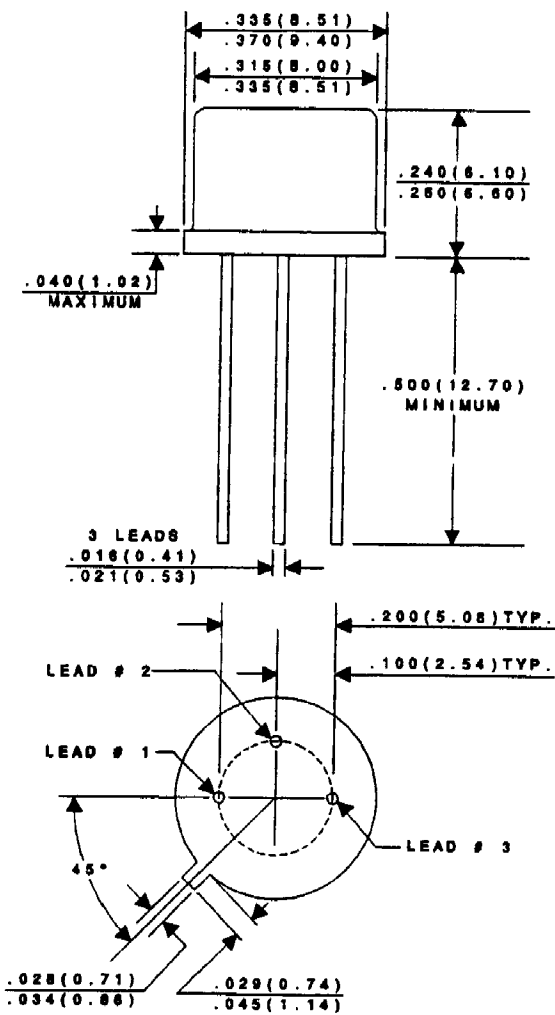
<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
I _{CEV}	V _{CE} =45V, V _{BE(off)} =1.5V		10	μA
I _{CEV}	V _{CE} =45V, V _{BE(off)} =1.5V, T _C =150°C		1.0	mA
I _{CER}	V _{CE} =40V, R _{BE} =100Ω		10	μA
I _{CER}	V _{CE} =40V, R _{BE} =100Ω, T _C =150°C		1.0	mA
I _{CEO}	V _{CE} =25V		100	μA
I _{EBO}	V _{EB} =3.5V		10	μA
BV _{CER}	I _C =10mA, R _{BE} =100Ω	45		V
BV _{CEO}	I _C =10mA	40		V
V _{CE(SAT)}	I _C =1.6A, I _B =160mA		1.0	V
V _{CE(SAT)}	I _C =3.2A, I _B =800mA		2.0	V
V _{BE(ON)}	V _{CE} =2.0V, I _C =1.6A		1.5	V
h _{FE}	V _{CE} =2.0V, I _C =1.6A	20	100	
h _{FE}	V _{CE} =2.0V, I _C =3.2A	4.0		
f _T	V _{CE} =2.0V, I _C =100mA, f=4.0MHz (2N5783)	8.0	60	MHz
f _T	V _{CE} =2.0V, I _C =100mA, f=200kHz (2N5786)	1.0	4.0	MHz
h _{fe}	V _{CE} =2.0V, I _C =100mA, f=1.0kHz	25		
t _{ON}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5783)		0.5	μs
t _{ON}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5786)		5.0	μs
t _{OFF}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5783)		2.5	μs
t _{OFF}	V _{CC} =30V, I _C =1.0A, I _{B1} =I _{B2} =100mA (2N5786)		15	μs



NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

JEDEC TO-39 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

LEAD CODE:

- 1) EMITTER
- 2) BASE
- 3) COLLECTOR