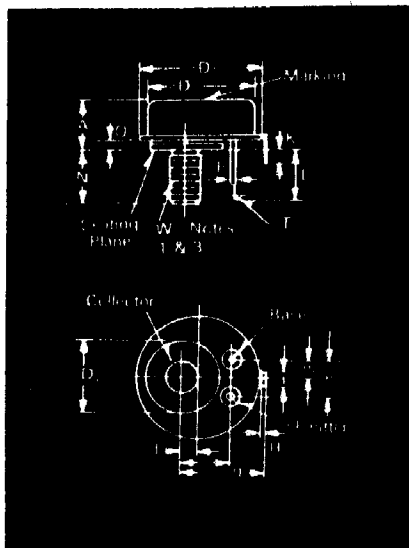


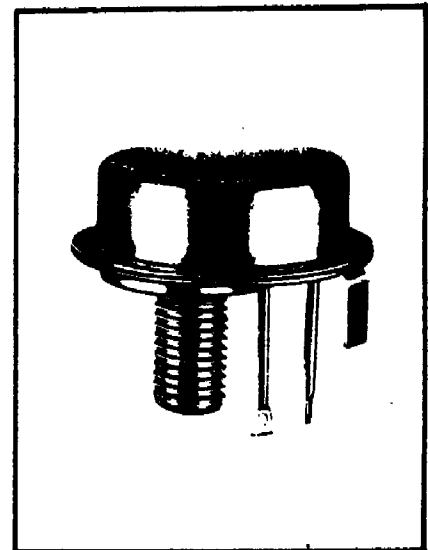
**NPN Power, Darlington
TRANSISTORS
2N2226-33**

**10 Ampere
50 — 200 Volts**



Symbol	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	.500	.560	12.70	14.22
φB	.045	.060	1.14	1.52
d	.140	.170	3.56	4.32
φD	1.240	1.280	31.50	32.51
φD ₁	.730	.770	18.54	19.56
φD ₂		1.125		28.58
e	.360	.400	9.14	10.16
e ₁	.180	.200	4.57	5.08
H	.014	.025	.36	.64
J	.140	.170	3.56	4.32
K	.130	.190	3.30	4.83
L	.550	.590	13.97	14.99
N	.550	.590	13.97	14.99
Q	.810	.850	20.57	21.59
Q ₁	.105	.140	2.67	3.56
S	.480	.520	12.19	13.21
φT	.050	.070	1.27	1.78
φW	¼-24 UNF-2A			

- Finish—Nickel Plate.
Approx. Weight—.9 oz. (25 g).
1. Complete threads to extend to within 2½ threads of seating plane.
 2. Contour and angular orientation of terminals is undefined.
 3. Pitch diameter of ¼-24 UNF-2A (coated) threads (ASA B1.1-1960).



Conforms to TO-82 Outline

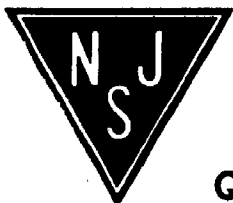
Features

- Gold Alloy Process
- No forward bias secondary breakdown to 100 volts
- High reverse bias S.O.A. for inductive loads
- Low thermal resistance with copper base
- 150 watt dissipation
- Protection from thermal fatigue with hard solder and molybdenum construction
- 25 volt V_{BE0}
- Low V_{CE(sat)}
- Lifetime Guarantee

Applications

- High Power Switching
- Amplifiers
- Servo Systems
- Regulators
- Modulators

Test	Symbol	2N2226 2N2230	2N2227 2N2231	2N2228 2N2232	2N2229 2N2233
Collector Voltage Sustaining	V _{CE0(sus)}	50	100	150	200



New Jersey Semi-Conductor Products, Inc.

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 SPRINGFIELD, NEW JERSEY 07081
 U.S.A.

TELEPHONE: (973) 376-2922
 (212) 227-6005
 FAX: (973) 376-8960

Maximum Ratings and Characteristics Tc = 25°C unless specified

	Symbol	JEDEC 2N2226 33	Units
* Operating and storage temperature		-65 To 150	°C
Collector-emitter sustaining voltage	V _{CEO (sus)}	50 To 200	Volts
* Emitter-base voltage	V _{EB0}	15	Volts
* Continuous collector current	I _C	10	AMPS
* Continuous base current	I _B	1	AMPS
* Thermal resistance	R _{θJC}	.5	°C/W
* Power dissipation Tc = 75°C	P _T	150	Watts
Power dissipation Tc = 100°C	P _T	100	Watts

* JEDEC Registered Parameters

Electrical Characteristics 2N2226-29

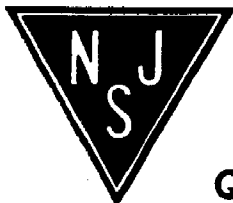
T_C = 25°C unless otherwise specified

	Symbol	Minimum	Typical	Max.	Units
Collector current at V _{CEX} = V _{CE} (from max. ratings), T _C = 150°C, V _{BE} = -1.5 Vdc...	I _{CEX}	...	.....	20	mAdc
Emitter current at V _{BE} = -15 Vdc, I _C = 0.....	I _{EB0}	...	.....	15	mAdc
Emitter current at V _{BE} = -15 Vdc, I _C = 0, T _C = 150°C.....	I _{EB0}	...	.....	30	mAdc
Gain bandwidth product at I _C = 10 Adc.....	f _T	...	500	.....	kc
Saturation voltage at I _C = 10 Adc, I _B = 150m Adc.....	V _{CE(sat)}	...	2.2	3.5	Vdc
Dc current gain at V _{CE} = 6 Vdc, I _C = 10 Adc.....	h _{FE}	100	360	.....	.....
Base voltage, at I _C = 10 Adc, I _B = 150 mAdc.....	V _{BE (sat)}	...	3.0	4.0	Vdc
Beta cut-off frequency at V _{CE} = 12 Vdc, I _C = 7 Adc.....	f _{hfe}	...	10	.....	kc
Turn-on time at I _C = 10 Adc, I _{B on} = 400 mAdc, V _{CE} = 12 Vdc.....	t _d + t _r	...	4.5	.....	μsec
Turn-off time at I _C = 10 Adc, I _{B off} = -400 mAdc, V _{CE} = 12 Vdc, V _{BE off} = -15 Vdc.....	t _s + t _f	...	25	.....	μsec

Electrical Characteristics 2N2230-33

T_C = 25°C unless otherwise specified

	Symbol	Minimum	Typical	Max.	Units
Collector current at V _{CEX} = V _{CE} (from max. ratings), T _C = 150°C, V _{BE} = -1.5 Vdc...	I _{CEX}	...	.....	20	mAdc
Emitter current at V _{BE} = -15 Vdc, I _C = 0.....	I _{EB0}	...	.....	15	mAdc
Emitter current at V _{BE} = -15 Vdc, I _C = 0, T _C = 150°C.....	I _{EB0}	...	.....	30	mAdc
Gain bandwidth product at I _C = 10 Adc.....	f _T	...	500	.....	kc
Saturation voltage at I _C = 10 Adc, I _B = 150m Adc.....	V _{CE(sat)}	...	2.2	3.5	Vdc
Dc current gain at V _{CE} = 6 Vdc, I _C = 10 Adc.....	h _{FE}	400	660	.....	.....
Base voltage, at I _C = 10 Adc, I _B = 40 mAdc.....	V _{BE (sat)}	...	3.0	4.0	Vdc
Beta cut-off frequency at V _{CE} = 12 Vdc, I _C = 7 Adc.....	f _{hfe}	...	7	.....	kc
Turn-on time at I _C = 10 Adc, I _{B on} = 200 mAdc, V _{CE} = 12 Vdc.....	t _d + t _r	...	5	.....	μsec
Turn-off time at I _C = 10 Adc, I _{B off} = -200 mAdc, V _{CE} = 12 Vdc, V _{BE off} = -15 Vdc.....	t _s + t _f	...	29	.....	μsec



Quality Semi-Conductors