

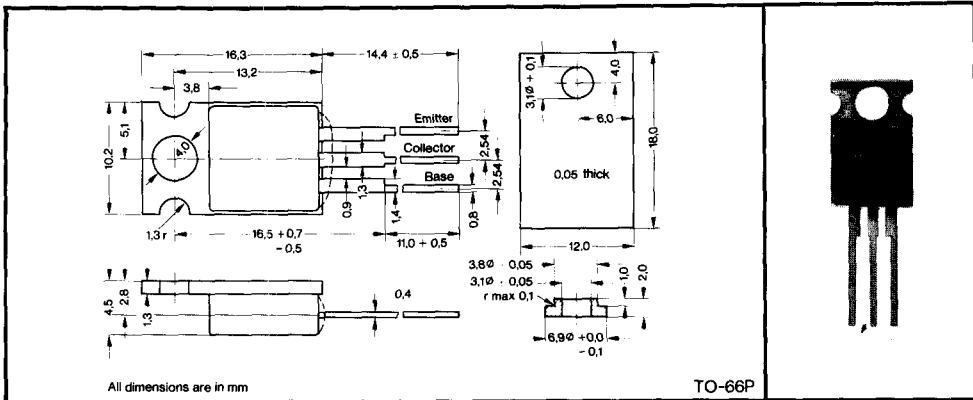
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- Amplifier
- Switch
- Complementary Output Stages
- Complementary with BD633, BD635, BD637

mechanical data



absolute maximum ratings

	BD634	BD636	BD638
Collector-Emitter Voltage	-45 V	-60 V	-80 V
Collector-Base Voltage	-45 V	-60 V	-100 V
Emitter-Base Voltage	←	-5 V	→
Continuous Collector Current	←	-2 A	→
Peak Collector Current	←	-5 A	→
Continuous Base Current	←	-0.3 A	→
Junction Temperature	←	150 °C	→
Storage Temperature Range	←	-55 °C to 150 °C	→
Device Dissipation (T _C < 25 °C) (See Note 1)	←	30 W	→
Collector Junction to Case Thermal Resistance	←	< 4.17 K/W	→
Continuous Device Dissipation at 25 °C Free Air Temperature (See Note 2)	←	2 W	→

NOTES: 1. Derate linearly to 150 °C case temperature at a rate of 0.24 W/°C.
2. Derate linearly to 150 °C free air temperature at a rate of 16 mW/°C.

BD634, BD636, BD638

PNP EPIBASE POWER TRANSISTORS

electrical characteristics at 25 °C free-air temperature

PARAMETER	TEST CONDITIONS	BD634	BD636	BD638	UNIT	
V(BR)CEO	Collector-Emitter Breakdown Voltage	I _C = -30 mA	> -45	> -60	> -80	V
V(BR)CBO	Collector-Base Breakdown Voltage	I _C = -100 μA	> -45	> -60	> -100	V
V(BR)EBO	Emitter-Base Breakdown Voltage	I _E = -1 mA	> -5	> -5	> -5	V
I _{CES}	Collector Cutoff Current	V _{CE} = -45 V	< -200			μA
		V _{CE} = -60 V		< -200		μA
		V _{CE} = -100 V			< -200	μA
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -1 A, I _B = -0.1 A	< -0.6	< -0.6	< -0.6	V
V _{BE}	Base-Emitter Voltage	I _C = -1 A, V _{CE} = -2 V	< -1.3	< -1.3	< -1.3	V
h _{FE}	Small Signal Common-Emitter Forward Current Transfer Ratio	V _{CE} = -2 V, I _C = -25 mA	> 40	> 40	> 40	
		V _{CE} = -2 V, I _C = -1 A	> 25	> 25	> 25	

TEXAS INSTRUMENTS

Typ type		$P_{tot} @$ $T_C = 25\text{ }^\circ\text{C}$ (100 $^\circ\text{C}$)	V_{CEO} min	I_{CD} max A	min	h_{FE} max	@	I_C A
NPN	PNP	W		A				A
TIP 35 B	TIP 36 B	90	80	25	25	100		1,5
TIP 35 C	TIP 36 C	90	100	25	25	100		1,5
TIP 41	TIP 42	65	40	6	15	75		3
TIP 41 A	TIP 42 A	65	60	6	15	75		3
TIP 41 B	TIP 42 B	65	80	6	15	75		3
TIP 41 C	TIP 42 C	65	100	6	15	75		3
TIP 3055	TIP 5530	90	70	15	20			4
BD 633	BD 634	30	45	2	25			1
BD 635	BD 636	30	60	2	25			1
BD 637	BD 638	30	80	2	25			1
BD 733	BD 734	40	32	4	50			2
BD 735	BD 736	40	32	4	50			2
BD 737	BD738	40	45	4	40			2
TIP 110	TIP 115	50	60	2	1000			1
TIP 111	TIP 116	50	80	2	1000			1
TIP 112	TIP 117	50	100	2	1000			1
TIP 120	TIP 125	65	60	5	1000			3
TIP 121	TIP 126	65	80	5	1000			3
TIP 122	TIP 127	65	100	5	1000			3
TIP 140	TIP 145	125	60	10	1000			5
TIP 141	TIP 146	125	80	10	1000			5
TIP 142	TIP 147	125	100	10	1000			5

Typ type	$T_A = 25\text{ }^\circ\text{C}$ (100 $^\circ\text{C}$)	$P_{tot} @$ $T_C = 25\text{ }^\circ\text{C}$ (100 $^\circ\text{C}$)	V_{CEO} min V	I_{CD} max A	min	h_{FE} max	@	I_C A
	W	W		A				A
2N 4915	4	87,5	80	5	25	100		2,5
2N 4998	2	(20)	80	2	30	90		1
2N 5000	2	(20)	80	2	70	200		1
2N 5002		(33,3)	80	5	30	90		2,5
2N 5004		(33,3)	80	5	70	200		2,5
2N 5038	5	140	90	20	20	100		12
2N 5039	5	140	75	20	20	100		10
2N 5148	1	(4)	80	2	30	90		1
2N 5150	1	(4)	80	2	70	200		1
2N 5152		(6,7)	80	2	30	90		2,5
2N 5154		(6,7)	80	2	70	200		2,5
2N 5301	5	200	40	20	40	60		1
2N 5302	5	200	60	20	40	60		1
2N 5303	5	200	80	20	40	60		1

f _T min MHz	I _{CE} (I _{CEO}) μA	@	V _{CE} V	Gehäuse package	Anwendungen applications, remarks
3	700		80	TO-3P	Verstärker, Schalter, komplementär zu TIP 36 B amplifier, switch, complementary to TIP 36 B
3	700		100	TO-66P	Verstärker, Schalter, komplementär zu TIP 36 C amplifier, switch, complementary to TIP 36 C
3	400		40	TO-66P	Verstärker, Schalter, komplementär zu TIP 42 amplifier, switch, complementary to TIP 42
3	400		60	TO-66P	Verstärker, Schalter, komplementär zu TIP 42 A amplifier, switch, complementary to TIP 42 A
3	400		80	TO-66P	Verstärker, Schalter, komplementär zu TIP 42 B amplifier, switch, complementary to TIP 42 B
3	400		100	TO-66P	Verstärker, Schalter, komplementär zu TIP 42 C amplifier, switch, complementary to TIP 42 C
				TO-3P	
				TO-66 TO-66 TO-66	Komplementär Endstufen for complementary output stages
				TO-66P TO-66P TO-66P	Darlington
				TO-66P TO-66P TO-66P	Verstärker, Schalter amplifier, switch Darlington
				TO-3P TO-3P TO-3P	Darlington
f _T min MHz	I _{CE} (I _{CEO}) μA	@	V _{CE} V	Gehäuse package	Anwendungen, Bemerkungen applications, remarks
4	(1000)		80	TO-3	Verstärker, Schalter amplifier, switch
50	(0,05)		40	TO-59	Für Computeranwendung
60	(0,05)		40	TO-59	komplementär zu 2N 4999, 2N 5001, 2N 5003, 2N 5005
60	(0,05)		40	TO-59	computer application
70	(0,05)		40	TO-59	complementary to 2N 4999, 2N 5001, 2N 5003, 2N 5005
60	50		140	TO-3	Verstärker und schnelle Schalter
60	50		110	TO-3	amplifier and high-speed switch
50	(0,05)		40	TO-39	Für Computeranwendung
60	(0,05)		40	TO-39	komplementär zu 2N 5147, 2N 5149, 2N 5151, 2N 5153
60	(0,05)		40	TO-39	computer application
70	(0,05)		40	TO-39	complementary to 2N 5147, 2N 5149, 2N 5151, 2N 5153
4	(5)		40	TO-3	Verstärker, Schalter
4	(5)		60	TO-3	amplifier, switch
4	(5)		80	TO-3	