

2N2635 (GERMANIUM)



PNP germanium epitaxial mesa transistor for high-speed switching applications.

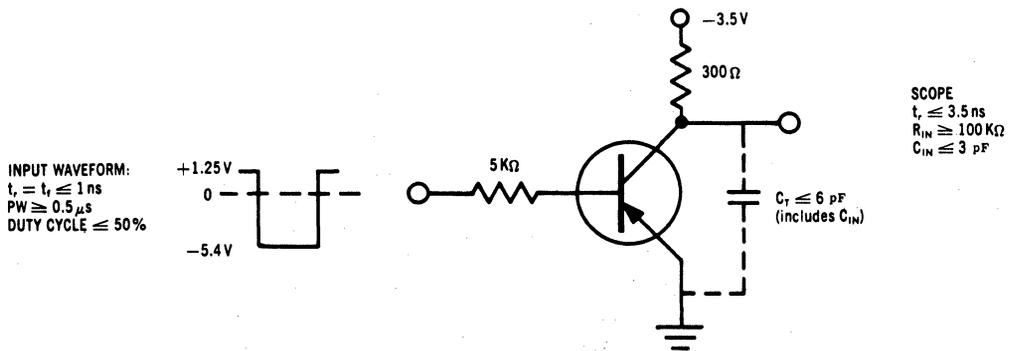
CASE 22 (TO-18)

Collector connected to case

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

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CB}	30	Vdc
Collector-Emitter Voltage	V_{CEO}	15	Vdc
Emitter-Base Voltage	V_{EB}	2.5	Vdc
Collector Current (Continuous)	I_C	100	mAdc
Junction Temperature	T_J	+100	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +100	$^\circ\text{C}$
Device Dissipation @ 25°C Ambient Temperature (Derate 2mW/ $^\circ\text{C}$ above 25°C)	P_D	150 2.0	mW mW/ $^\circ\text{C}$

SWITCHING TIME TEST CIRCUIT



2N2635 (Continued)

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

Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage ($I_C = 100 \mu\text{A}$, $I_E = 0$)	BV_{CBO}	30	50	---	Vdc
Collector-Emitter Breakdown Voltage ($I_C = 2 \text{mA}$, $I_B = 0$)	BV_{CEO}	15	30	---	Vdc
Emitter-Base Breakdown Voltage ($I_E = 100 \mu\text{A}$, $I_C = 0$)	BV_{EBO}	2.5	4.5	---	Vdc
Collector-Base Cutoff Current ($V_{CB} = 25\text{V}$, $I_E = 0$) ($V_{CB} = 25\text{V}$, $I_E = 0$, $T_A = +55^\circ\text{C}$)	I_{CBO}	---	1.0 5.0	5.0 20	μA
Emitter-Base Cutoff Current ($V_{EB} = 1\text{V}$, $I_C = 0$)	I_{EBO}	---	2.0	20	μA
Static Forward Current Transfer Ratio ($I_C = 10 \text{mA}$, $V_{CE} = 0.5\text{V}$) ($I_C = 50 \text{mA}$, $V_{CE} = 1\text{V}$) ($I_C = 50 \text{mA}$, $V_{CE} = 1\text{V}$, $T_A = -55^\circ\text{C}$) ($I_C = 100 \text{mA}$, $V_{CE} = 1\text{V}$)	h_{FE}	30 45 25 30	---	---	---
Base-Emitter Voltage ($I_C = 10 \text{mA}$, $I_B = 0.5 \text{mA}$) ($I_C = 50 \text{mA}$, $I_B = 2.5 \text{mA}$) ($I_C = 50 \text{mA}$, $I_B = 2.5 \text{mA}$, $T_A = -55^\circ\text{C}$) ($I_C = 100 \text{mA}$, $I_B = 10 \text{mA}$)	V_{BE}	---	0.36 0.47 0.56 0.57	0.45 0.70 0.85 0.90	Vdc
Collector-Emitter Saturation Voltage ($I_C = 10 \text{mA}$, $I_B = 0.5 \text{mA}$) ($I_C = 50 \text{mA}$, $I_B = 2.5 \text{mA}$) ($I_C = 50 \text{mA}$, $I_B = 2.5 \text{mA}$, $T_A = +55^\circ\text{C}$) ($I_C = 100 \text{mA}$, $I_B = 10 \text{mA}$)	$V_{CE}(\text{sat})$	---	0.13 0.20 0.22 0.23	0.20 0.40 0.45 0.75	Vdc
Small-Signal Forward Current Transfer Ratio ($I_C = 30 \text{mA}$, $V_{CE} = 2\text{V}$, $f = 100 \text{MHz}$)	$ h_{fe} $	1.5	---	---	---
Collector Output Capacitance ($V_{CB} = 5 \text{V}$, $I_E = 0$, $f = 1 \text{MHz}$)	C_{ob}	---	2.5	5.0	pF
Input Capacitance ($V_{BE} = 1\text{V}$, $I_C = 0$, $f = 1 \text{MHz}$)	C_{ib}	---	---	4.0	pF
Delay Time	t_d	---	15	20	ns
Rise Time	t_r	---	20	30	ns
Storage Time	t_s	---	100	185	ns
Fall Time	t_f	---	35	65	ns