

Silicon Diffused Power Transistor

BU2532AL

GENERAL DESCRIPTION

New generation, high-voltage, high-speed switching npn transistor in a plastic envelope intended for use in horizontal deflection circuits of high resolution monitors up to 82 kHz.

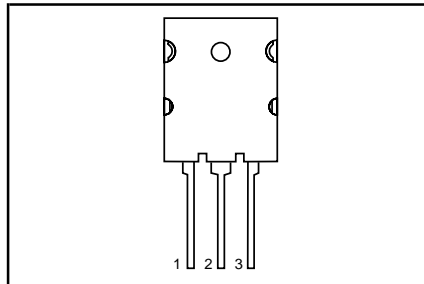
QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_{CESM}	Collector-emitter voltage peak value	$V_{BE} = 0$	-	1500	V
V_{CEO}	Collector-emitter voltage (open base)		-	800	V
I_C	Collector current (DC)		-	16	A
I_{CM}	Collector current peak value		-	40	A
P_{tot}	Total power dissipation	$T_{mb} \leq 25\text{ }^\circ\text{C}$	-	125	W
V_{CESat}	Collector-emitter saturation voltage	$I_C = 7.0\text{ A}; I_B = 1.17\text{ A}$	-	5.0	V
I_{Csat}	Collector saturation current		7	-	A
t_s	Storage time	$I_{Csat} = 7.0\text{ A}; I_{B(end)} = 1\text{ A}$	1.4	1.8	μs

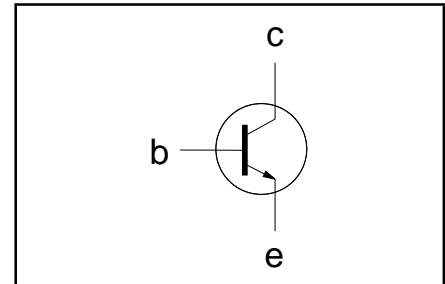
PINNING - SOT430

PIN	DESCRIPTION
1	base
2	collector
3	emitter
heat sink	collector

PIN CONFIGURATION



SYMBOL



LIMITING VALUES

Limiting values in accordance with the Absolute Maximum Rating System (IEC 134)

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CESM}	Collector-emitter voltage peak value	$V_{BE} = 0\text{ V}$	-	1500	V
V_{CEO}	Collector-emitter voltage (open base)		-	800	V
I_C	Collector current (DC)		-	16	A
I_{CM}	Collector current peak value		-	40	A
I_B	Base current (DC)		-	10	A
I_{BM}	Base current peak value		-	15	A
$-I_{B(AV)}$	Reverse base current	average over any 20 ms period	-	200	mA
$-I_{BM}$	Reverse base current peak value ¹		-	10	A
P_{tot}	Total power dissipation	$T_{mb} \leq 25\text{ }^\circ\text{C}$	-	125	W
T_{stg}	Storage temperature		-55	150	$^\circ\text{C}$
T_j	Junction temperature		-	150	$^\circ\text{C}$

THERMAL RESISTANCES

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
$R_{th\ j-mb}$	Junction to mounting base	-	-	1.0	K/W
$R_{th\ j-a}$	Junction to ambient	in free air	35	-	K/W

¹ Turn-off current.

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STATIC CHARACTERISTICS

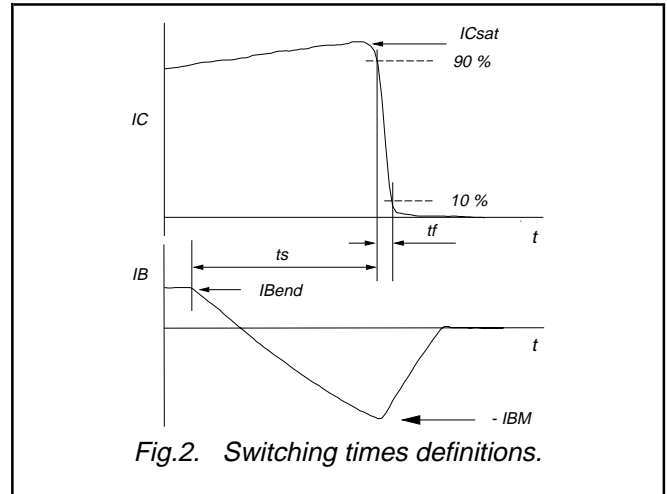
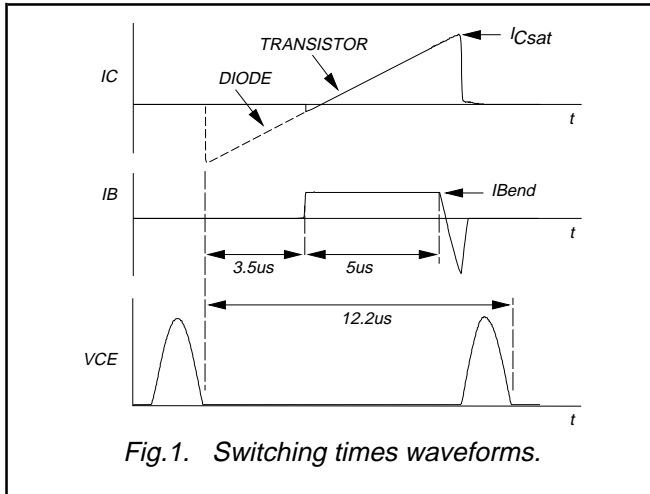
$T_{mb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I_{CES}	Collector cut-off current ²	$V_{BE} = 0\text{ V}; V_{CE} = V_{CESMmax}$	-	-	1.0	mA
I_{CES}		$V_{BE} = 0\text{ V}; V_{CE} = V_{CESMmax}; T_j = 125\text{ }^{\circ}\text{C}$	-	-	2.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB} = 7.5\text{ V}; I_C = 0\text{ A}$	-	-	1.0	mA
BV_{EBO}	Base-emitter breakdown voltage	$I_B = 1\text{ mA}$	7.5	14	-	V
V_{CEsat}	Collector-emitter saturation voltage	$I_C = 7.0\text{ A}; I_B = 1.17\text{ A}$	-	-	5.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C = 7.0\text{ A}; I_B = 1.17\text{ A}$	-	-	1.0	V
h_{FE}	DC current gain	$I_C = 1\text{ A}; V_{CE} = 5\text{ V}$	-	17	-	
h_{FE}		$I_C = 7\text{ A}; V_{CE} = 5\text{ V}$	6	9	12.5	

DYNAMIC CHARACTERISTICS

$T_{mb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified

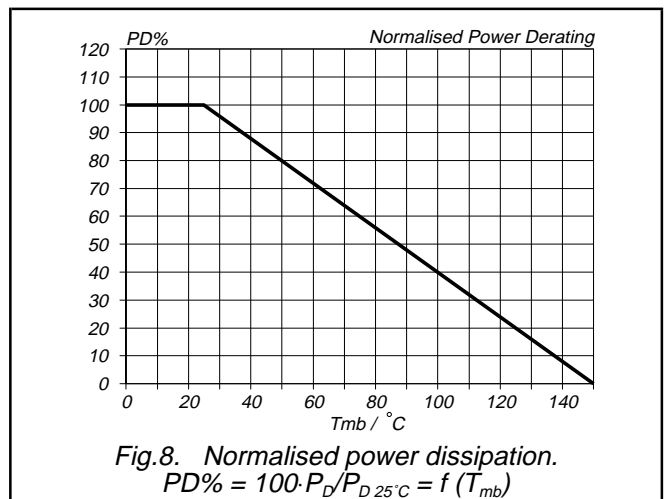
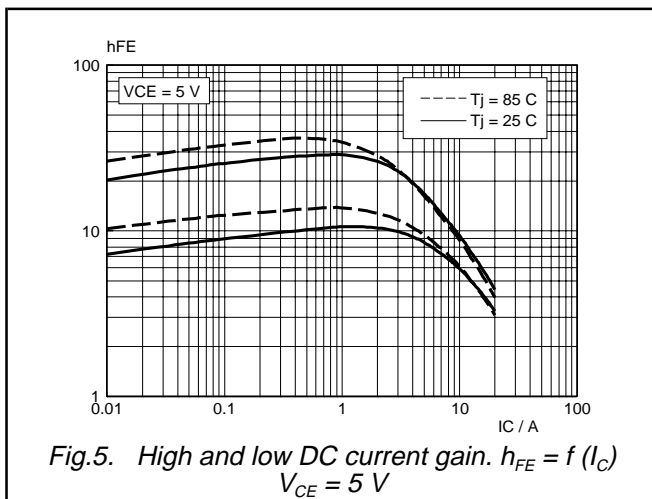
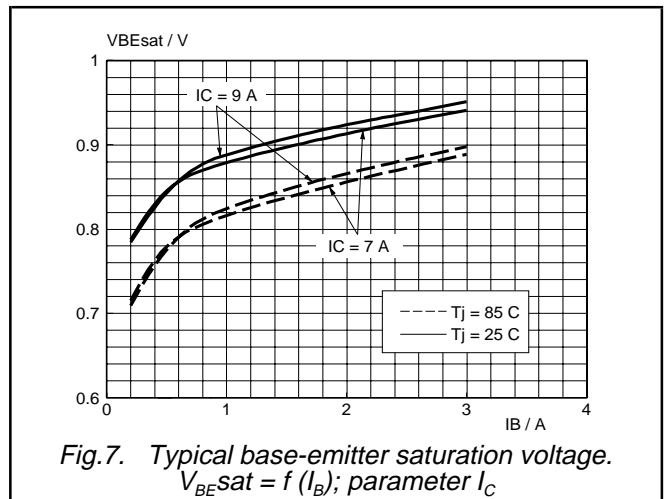
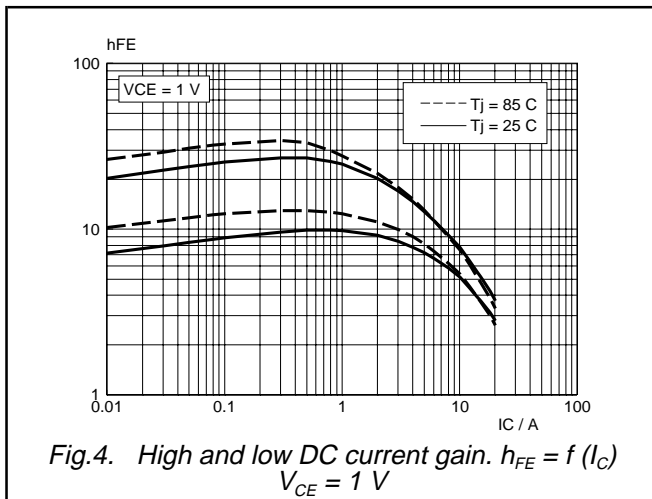
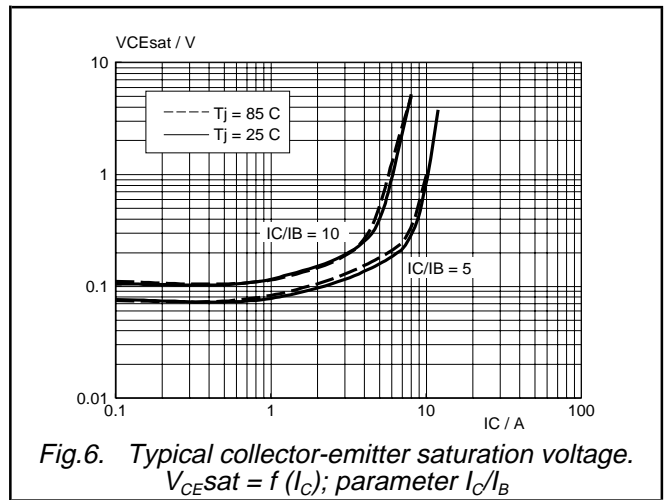
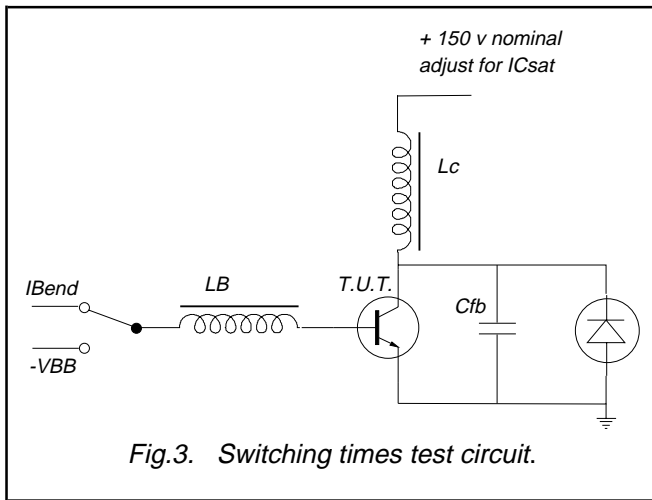
SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
t_s	Switching times (82 kHz line deflection dynamic test circuit). Turn-off storage time	$I_{Csat} = 7.0\text{ A}; L_C = 100\text{ }\mu\text{H}; C_{fb} = 3\text{ nF}; V_{CC} = 138\text{ V}; I_{B(end)} = 1.0\text{ A}$	1.4	1.8	μs
t_f	Turn-off fall time		0.06	0.1	μs



² Measured with half sine-wave voltage (curve tracer).

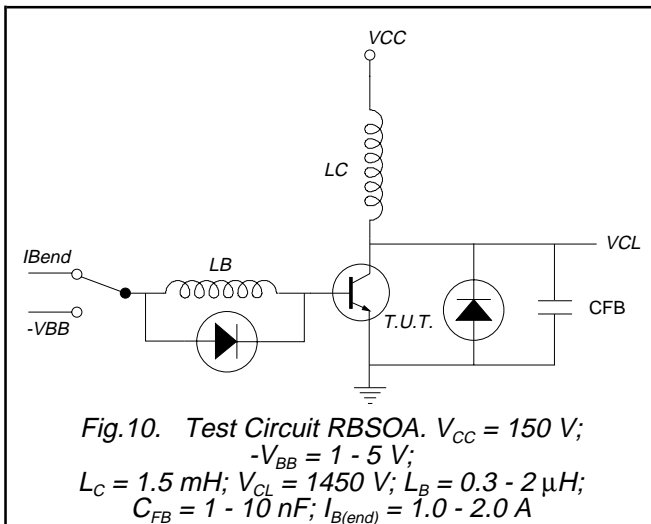
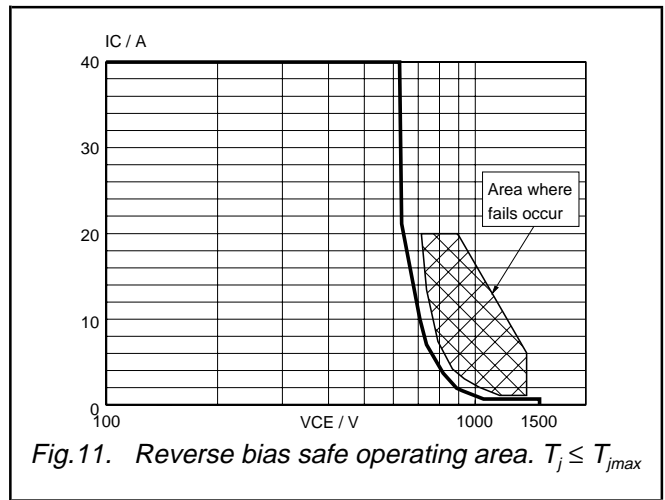
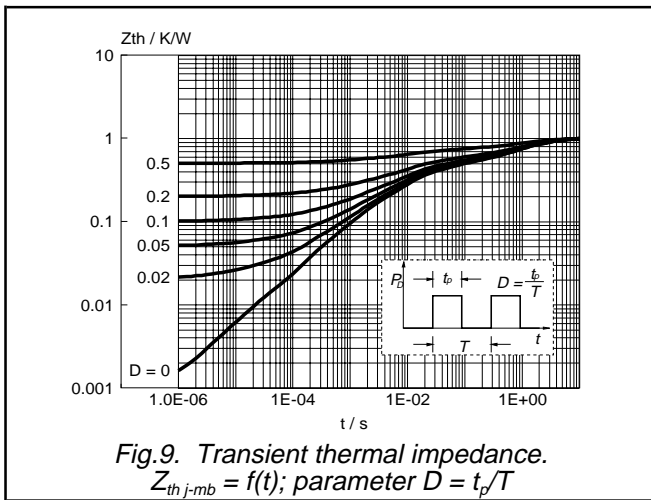
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MECHANICAL DATA

