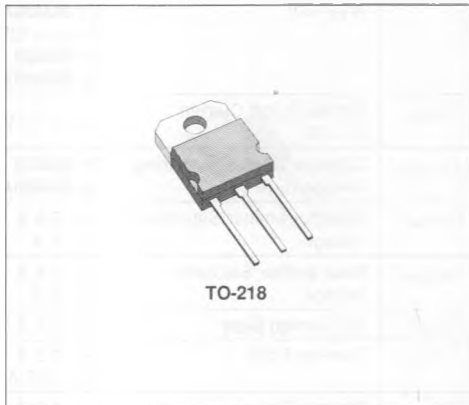


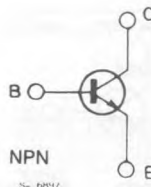
HIGH VOLTAGE POWER SWITCH

DESCRIPTION

The BU426 and BU426A are silicon multiepitaxial mesa NPN transistors in SOT-93 plastic package, particularly intended for switch-mode CTV supply systems.



INTERNAL SCHEMATIC DIAGRAMS



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		BU426	BU426A	
V_{CES}	Collector-emitter Voltage ($V_{BE} = 0$)	800	900	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	375	400	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	10		V
I_C	Collector-current	6		A
I_{CM}	Collector-peak Current ($t_p = 2$ ms)	8		A
I_B	Base Current	3		A
P_{TOT}	Total Power Dissipation at $T_{case} \leq 25$ °C	113		W
T_{stg}	Storage Temperature	- 65 to 150		°C
T_j	Junction Temperature	150		°C

THERMAL DATA

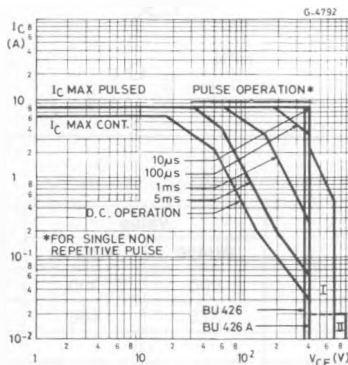
$R_{\theta J-case}$	Thermal Resistance Junction-case	Max	1.1	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
I_{CES}	Collector Cutoff Current ($V_{BE} = 0$)	for BU426 $V_{CE} = 800 V$			1	mA	
		for BU426A $V_{CE} = 900 V$			1	mA	
		$T_{case} = 125^{\circ}C$					
		for BU426 $V_{CE} = 800 V$			2	mA	
	for BU426A $V_{CE} = 900 V$			2	mA		
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EB} = 10 V$			10	mA	
$V_{CE0(SUS)}^*$	Collector-emitter Sustaining Voltage ($I_B = 0$)	for BU426 $I_C = 100 mA$	375			V	
		for BU426A $I_C = 100 mA$	400			V	
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 2.5 A$ $I_B = 0.5 A$			1.5	V	
		$I_C = 4 A$ $I_B = 1.25 A$			3	V	
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = 2.5 A$ $I_B = 0.5 A$			1.4	V	
		$I_C = 4 A$ $I_B = 1.25 A$			1.6	V	
h_{FE}^*	DC Current Gain	$I_C = 0.6 A$ $V_{CE} = 5 V$		30	60		
t_{on}	Turn-on Time	$I_C = 2.5 A$ $I_{B1} = 0.5 A$ $V_{CC} = 250 V$		0.25	0.5	μs	
t_s	Storage Time	$I_C = 2.5 A$ $I_{B1} = 0.5 A$ $V_{CC} = 250 V$		2.5	3.5	μs	
t_f	Fall Time		$I_{B2} = -1 A$		0.2	0.5	μs
t_f	Fall Time	$I_C = 2.5 A$ $I_{B2} = -1 A$ $T_{case} = 100^{\circ}C$ $V_{CC} = 250 V$			0.75	μs	

* Pulsed : pulse duration = 300 μs , duty cycle = 1.5%.

Safe Operating Areas.



I = Area of permissible operation driving turn-on provided $R_{BE} = 100\Omega$ and $t_p \leq 0.6\mu s$.
 II = Area of permissible operation with $V_{BE} \leq 0$; $t_p < 2\mu s$.