

TECHNICAL PRODUCT INFORMATION

Technical measurement solutions for

- semiconductor
- electronic &
- high frequency questions.

Your contact:

Technical support, services, demo & rental equipment, price information & quotes, consulting:

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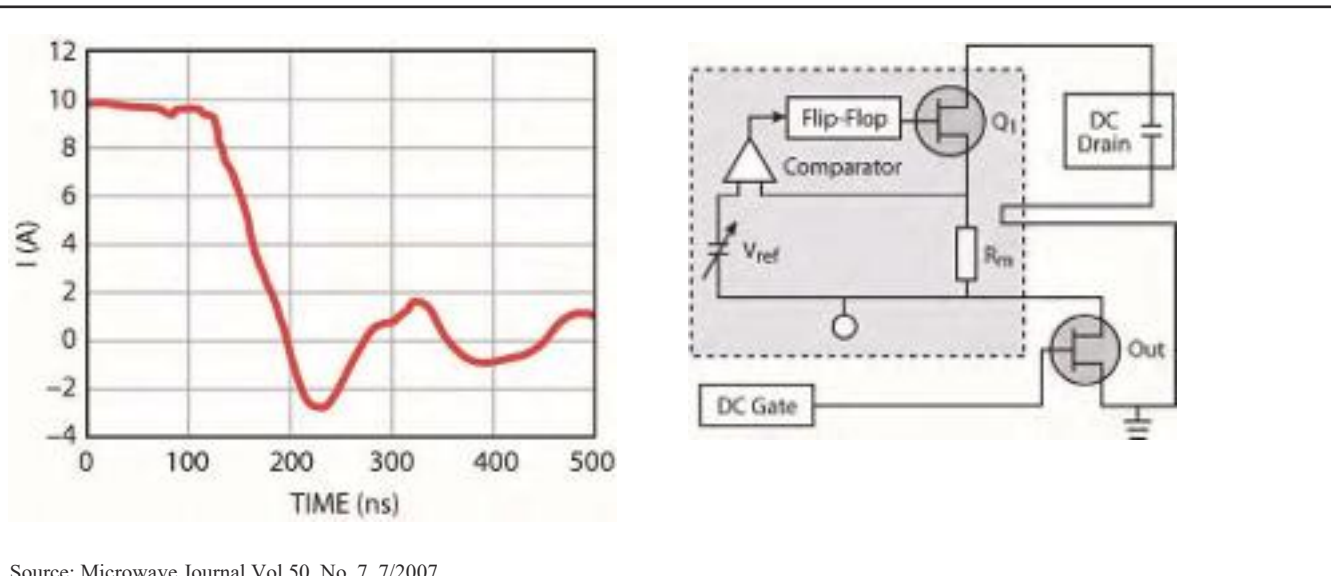
eFuse 2 -300-10



The security switch eFuse 2-300-10 acts as a fuse in the bias line, providing very fast switch-off times when the threshold current level is reached and so protecting the DUT and measurement equipment, such as the probe tips. The eFuse can be used to protect FET-type transistors as well as for bipolar, including HBT's.

To characterize transistors during development, on-wafer measurements (of sub-cells) are an indispensable tool. Typical DC voltages and currents that bias the DUT exceed 50V and 10A and big power supplies are required. When the DUT reaches breakdown, the current limits of the supplies are not held properly or fast enough and the DUT is destroyed due to the high amount of energy stored in the output capacitor of the power supply. This can also blast away part of the wafer, burn or weld down probe tips or destroy other expensive electronic equipment. Using the eFuse you can protect wafer probes, bias tees, connectors and regularly the transistors themselves very easily.

- Shut-off time < 300 ns
- Current Limit range 0...10 A
- Voltage up to 300 VDC
- Different connections possible
- Low voltage drop, 50mΩ series resistance.
- RS232 interface for remote control
- Full front panel control via handy turn-push knob



Technical Data				
Parameters		Conditions	Data	Unit
V_i	Allowable Input Voltage DC	$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}$	0 - 300	VDC
I_{limit}	Current limit adjustment	$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}$	0 - 10	ADC
	Limit setting accuracy	$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}; I_a > 1 \text{ A}$	5	%
t_{sw}	Turn-off-time	$90\% - 10\% \cdot I_{\text{nom}}$	< 300	ns
I_{nom}	Nominal current	$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}$	10	ADC
ΔV_{io}	Voltage drop	$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}; I_a = 10 \text{ A}$	500	mVDC
R_i	Series/sense Resistance	$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}$	50	$\text{m}\Omega$
T_k	Temperature Coefficient	$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}$	0.03	% / K
General Data				
Parameters		Conditions	Data	Unit
Short circuit Immunity		$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}$	continuous	VDC
Input Voltage AC (mains)		$0^{\circ} \text{ C} < T_a < 40^{\circ} \text{ C}$	90-264	VAC
Net Frequency (mains)			47...63	Hz
Mains fuse			100	mA/T
Ambient temperature		$I_{\text{load}} = I_{\text{nom}}$	0 - 40	$^{\circ} \text{ C}$
Dimensions		L x B x H max	ca. 23 x 20 x 8	cm
The eFuse is programmable via RS 232 within its functional range. It has current measurement capability, include remote read-out, but with limited accuracy (~5%). Technical Data at $T_a = 25^{\circ} \text{ C}$ unless otherwise specified.				

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