



SEMIDRIVER™

IGBT Driver kit

SKHIBS 01

Preliminary Data

Features

- Driver for sixpack and sevenpack up to $V_{CES} = 1200\text{ V}$
- Used together with the transformer
- Inhibiting signal
- ERROR output (open collector transistor)

Typical Applications

- 1) $-25\text{ °C} \dots +85\text{ °C}$ on request
- 2) If temperature monitoring in use trip level can be adjusted with an external resistor
- 3) Factory adjusted
- 4) $R_{in} = 500\ \Omega$
- 5) Open collector output, external pull-up resistor
- 6) Time for shut off the gates when failure occur
- 7) Time between failure occur and information available at output ERROR (Pin 8)
- 8) At 20 kHz swithing frequency

Absolute Maximum Ratings

$T_a = 25\text{ °C}$, unless otherwise specified

Symbol	Conditions	Values	Units
V_S	Supply voltage primary	15,6	V
V_{iH}	Input signal voltage High (5 V input level)	6,5	V
V_{CE}	Collector-Emitter-Voltage	1200	V
dv/dt	Rate of rise and fall of voltage (secondary to primary side)	15	kV/ μ s
V_{CE}	Collector emitter voltage sense	1700	V
dv/dt	Rate of rise and fall of voltage (secondary to primary side)	75	kV/ μ s
$V_{isol\ IO}$	Isolation test volt. IN-OUT (2 sec. AC)	2500	V
T_{op} / T_{stg}	Operating Temp. / Storage Temp.	$0 \dots +70^{1)}$	$^{\circ}\text{C}$
$R_{Goff\ min}$	minimal R_{Goff}	2,7	Ω
$Q_{out/pulse}$	charge per pulse	9,6	μC
T_{op}	Operating temperature	$-25 \dots +85$	$^{\circ}\text{C}$
T_{stg}	Storage temperature	$-25 \dots +85$	$^{\circ}\text{C}$

Characteristics

$T_a = 25\text{ °C}$, unless otherwise specified

Symbol	Conditions	min.	typ.	max.	Units
V_S	Supply voltage primary	14,4	15,0	15,6	V
I_S	Supply current (max.)		0,3 ¹⁾		A
I_{SO}	Supply current primary side (no load)		90		mA
V_{iT+}	Input threshold voltage (HIGH) for 15 V input level	12,5			V
	for 5 V input level	2,4			V
V_{iT-}	Input threshold voltage (LOW) for 15 V input level			3,6	V
	for 5 V input level			0,50	V
$V_{G(on)}$	Turn-on output gate voltage		+ 15		V
$V_{G(off)}$	Turn-off output gate voltage		- 8		V
f	Maximum operating frequency		see fig. 15		
$td(on)_{IO}$	Input-output turn-on propagation time		1,4		μs
$td(off)_{IO}$	Input-output turn-off propagation time		1,4		μs
$t_{d(err)}$	Error input-output propagation time		1,0 ²⁾		μs
V_{CEstat}	Reference voltage for V_{CE} monitoring		6,3 ⁴⁾		V
R_{IN}	Input resistance		10		k Ω
R_{Gon}	Internal gate resistor for ON signal		22 ³⁾		Ω
R_{Goff}	Internal gate resistor for OFF signal		22 ³⁾		Ω
C_{ps}	Primary to secondary capacitance		12		pF

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