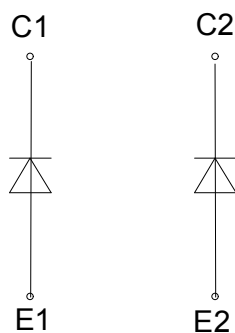
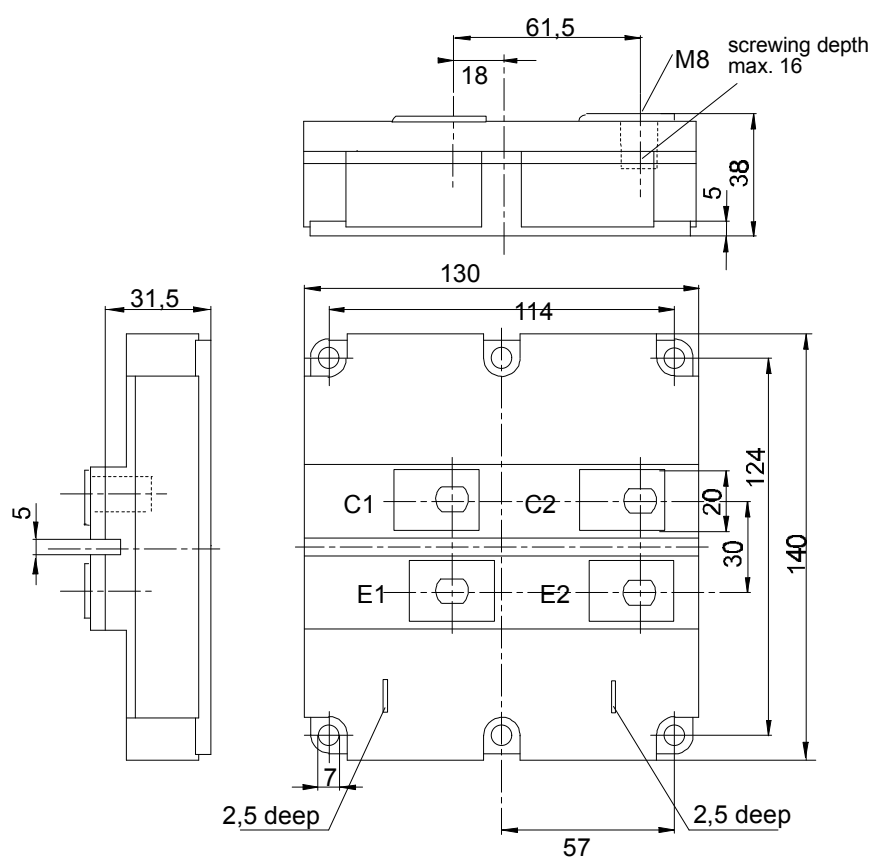




European Power-Semiconductor and Electronics Company

Marketing Information

DD 400 S 16 K4



DD 400 S 16 K4

Elektrische Eigenschaften	Electrical properties					
Höchstzulässige Werte	Maximum rated values					
Periodische Spitzensperrspannung	repetitive peak reverse voltage	$t_{vj} = 25^{\circ}\text{C}$	V_{RRM}	1600	V	
Dauergleichstrom	DC forward current		I_F	400	A	
Periodischer Spitzenstrom	repetitive peak forward current	$t_p = 1\text{ ms}$	I_{FRM}	800	A	
Isolations-Prüfspannung	insulation test voltage	RMS, f=50 Hz, t=1 min.	V_{ISOL}	3,4	kV	
Charakteristische Werte	Characteristic values			min.	typ.	max.
Durchlaßspannung	forward voltage	$t_{vj} = 25^{\circ}\text{C}, i_F = 400\text{ A}$	v_F	-	2,4	2,8 V
		$t_{vj} = 125^{\circ}\text{C}, i_F = 400\text{ A}$		-	2,2	- V
Sperrstrom	reverse current	$v_{CE} = 1200\text{ V}, t_{vj} = 25^{\circ}\text{C}$	i_R	-	4	- mA
		$v_{CE} = 1200\text{ V}, t_{vj} = 125^{\circ}\text{C}$		-	15	- mA
Rückstromspitze	peak reverse recovery current	$i_F=400\text{ A}, -di_F/dt=400\text{ A}/\mu\text{s}$	I_{RM}			
		$v_{RM} = 900\text{V}, t_{vj} = 25^{\circ}\text{C}$		-	35	- A
		$v_{RM} = 900\text{V}, t_{vj} = 125^{\circ}\text{C}$		-	65	- A
Sperrverzögerungsladung	recovered charge	$i_F=400\text{ A}, -di_F/dt=400\text{ A}/\mu\text{s}$	Q_r			
		$v_{RM} = 900\text{V}, t_{vj} = 25^{\circ}\text{C}$		-	10	- μAs
		$v_{RM} = 900\text{V}, t_{vj} = 125^{\circ}\text{C}$		-	40	- μAs
Thermische Eigenschaften	Thermal properties					
Innerer Wärmewiderstand	thermal resistance, junction to case	pro Modul/per module, DC	R_{thJC}		0,05	$^{\circ}\text{C}/\text{W}$
		pro Zweig/per arm, DC			0,10	$^{\circ}\text{C}/\text{W}$
Übergangs-Wärmewiderstand	thermal resistance, case to heatsink	pro Modul/per module	R_{thCK}		typ. 0,01	$^{\circ}\text{C}/\text{W}$
		pro Zweig/per arm			typ. 0,02	$^{\circ}\text{C}/\text{W}$
Höchstzul.Sperrschichttemperatur	max. junction temperature		$t_{vj\text{ max}}$		150	$^{\circ}\text{C}$
Betriebstemperatur	operating temperature		$t_{c\text{ op}}$		-40...+125	$^{\circ}\text{C}$
Lagertemperatur	storage temperature		t_{stg}		-40...+125	$^{\circ}\text{C}$
Mechanische Eigenschaften	Mechanical properties					
Innere Isolation	internal insulation				Al_2O_3	
Anzugsdrehmoment für mechanische Befestigung	mounting torque		M1		3	Nm
Anzugsdrehmoment für elektrische Anschlüsse	terminal connection torque	terminals M8	M2		8...10	Nm
Gewicht	weight		G		ca. 1500	g

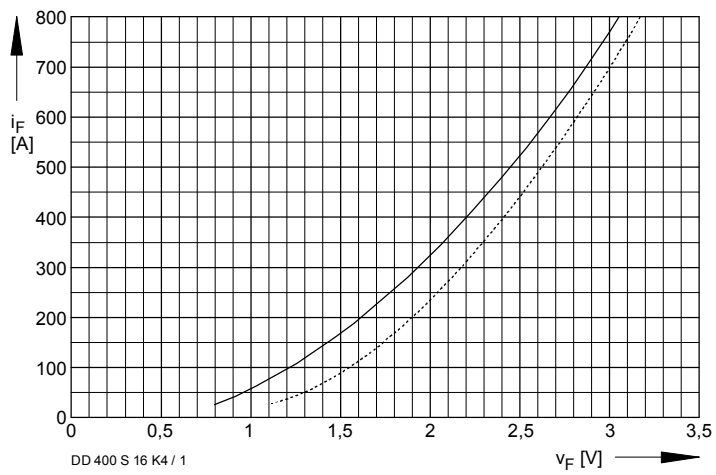


Bild / Fig. 1
 Durchlaßkennlinie pro Zweig (typisch)
 Forward characteristic per arm (typical)
 ----- $t_{vj} = 25^\circ\text{C}$
 ————— $t_{vj} = 125^\circ\text{C}$

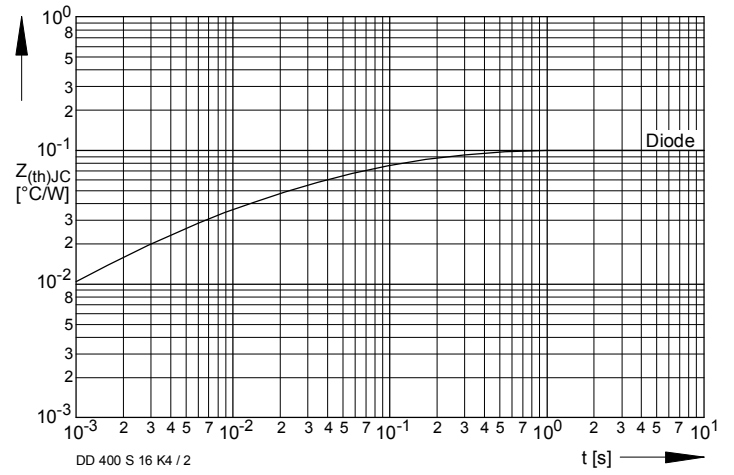


Bild / Fig. 2
 Transienter innerer Wärmewiderstand pro Zweig (DC)
 Transient thermal impedance per arm (DC)