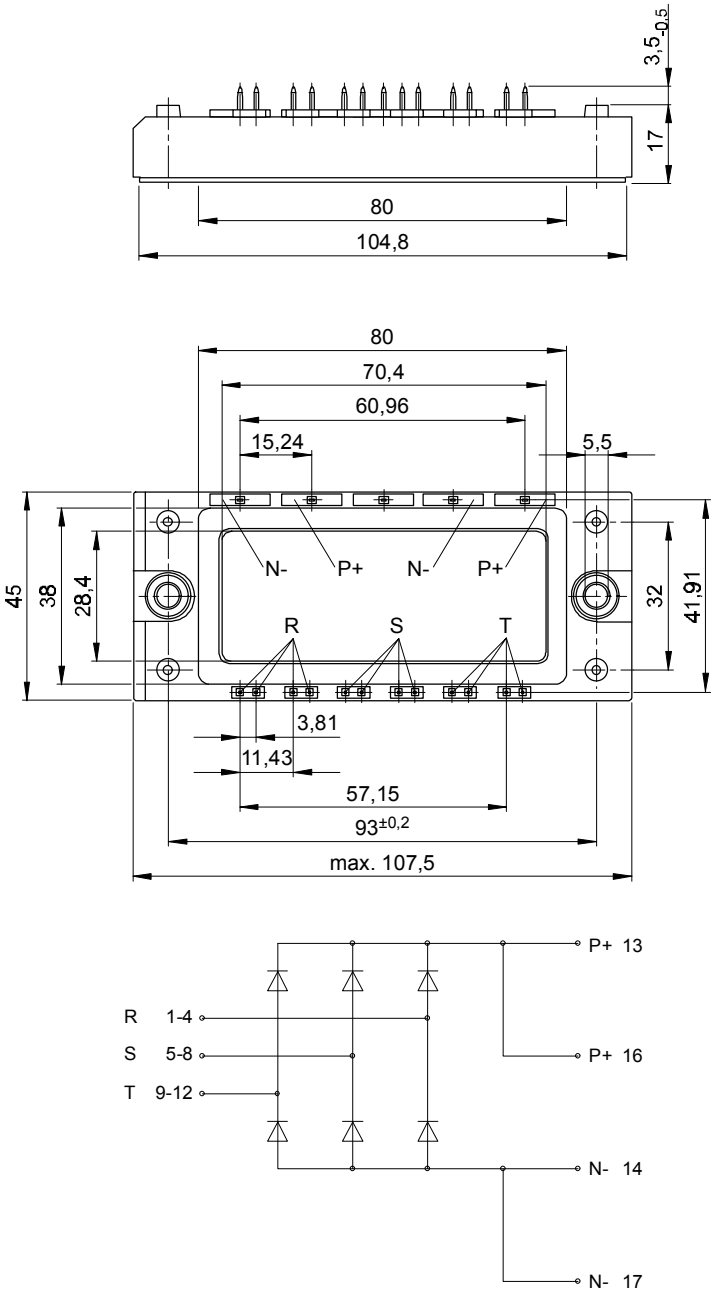
European Power-
Semiconductor and
Electronics Company
GmbH + Co. KG

Marketing Information
DD B6U 100 N 10...16..R
(ECONO)



VWK Sep. 1996

DD B6U 100 N 10...16..R (ECONO)

Elektrische Eigenschaften / Electrical properties

Höchstzulässige Werte / Maximum rated values

Periodische Spitzensperrspannung		T_{vj} = - 40°C...$T_{vj\,max}$	V_{RRM}		1000, 1200	V
repetitive peak reverse voltage					1400, 1600	V
Stoßspitzensperrspannung		T_{vj} = + 25°C...$T_{vj\,max}$	V_{RSM}		1100, 1300	V
non-repetitive peak reverse voltage					1500, 1700	V
Durchlaßstrom-Grenzeffektivwert (pro Element)			I_{FRMSM}		60	A
RMS forward current (per chip)						
Ausgangsstrom		T_C = 100°C	I_d		100	A
output current		T_C = 97°C			104	A
		T_A = 45°C, KP 0,5 S			58	A
		T_A = 45°C, KP 0,33 S			75	A
		T_A = 35°C, KP 0,41 S (V_L = 45l/s)			104	A
		T_A = 35°C, KP 0,33 S (V_L = 90l/s)			104	A
Stoßstrom-Grenzwert		T_{vj} = 25°C, t_p = 10ms	I_{FSM}		650	A
surge forward current		T_{vj} = $T_{vj\,max}$, t_p = 10ms			550	A
Grenzlastintegral		T_{vj} = 25°C, t_p = 10ms	I^2t		2100	A^2s
I²t-value		T_{vj} = $T_{vj\,max}$, t_p = 10ms			1500	A^2s

Charakteristische Werte / Characteristic values

Durchlaßspannung	forward voltage	T_{vj} = $T_{vj\,max}$, i_F = 100A	v_F	max.	1,55	V
Schleusenspannung	threshold voltage	T_{vj} = $T_{vj\,max}$	$V_{(TO)}$		0,75	V
Ersatzwiderstand	forward slope resistance	T_{vj} = $T_{vj\,max}$	r_T		5,5	mΩ
Sperrstrom	reverse current	T_{vj} = $T_{vj\,max}$, v_R = V_{RRM}	i_R	max.	5	mA
Isolations-Prüfspannung		RMS, f = 50Hz, t = 1min	V_{ISOL}		2,5	kV
insulation test voltage		RMS, f = 50Hz, t = 1sec			3,0	kV

Thermische Eigenschaften / Thermal properties

Innerer Wärmewiderstand		pro Modul / per module, Θ = 120°rect	R_{thJC}	max.	0,191	°C/W
thermal resistance, junction to case		pro Element / per chip, Θ = 120°rect		max.	1,150	°C/W
		pro Modul / per module, DC		max.	0,147	°C/W
		pro Element / per chip, DC		max.	0,880	°C/W
Ubergangs-Wärmewiderstand		pro Modul / per module	R_{thCK}	max.	0,033	°C/W
thermal resistance, case to heatsink		pro Element / per chip		max.	0,200	°C/W
Höchstzul. Sperrschichttemp.	max. junction temperature		$T_{vj\,max}$		150	°C
Betriebstemperatur	operating temperature		$T_{c\,op}$		- 40...+150	°C
Lagertemperatur	storage temperature		T_{stg}		- 40...+150	°C

Mechanische Eigenschaften / Mechanical properties

Gehäuse, siehe Anlage	case, see appendix					
Si-Elemente mit Lötkontakt, glaspassiviert						
Si-pellets with soldered contact, glass-passivated						
Innere Isolation	internal insulation				Al_2O_3	
Anzugsdrehm.f.mech.Befestig.	mounting torque	Toleranz / tolerance ±15%	M1		4	Nm
Gewicht	weight		G	typ.	185	g
Kriechstrecke	creepage distance				12,5	mm
Schwingfestigkeit	vibration resistance				50	m/s²

Kühlkörper / heatsinks :

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