

DMCB SERIES DIE



SPECIFICATIONS*				LIMITS				
PARAMETER	SYMBOL	TEST CONDITIONS	TYP ^b	DMCB1CHP		DMCB2CHP		UNIT
				MIN	MAX	MIN	MAX	
STATIC								
Drain-Source Breakdown Voltage	$V_{(BR)DS}$	$V_{GS} = V_{BS} = 0\text{ V}, I_D = 10\ \mu\text{A}$	35	30		30		V
		$V_{GS} = V_{BS} = -5\text{ V}, I_S = 10\ \text{nA}$	30	20		20		
Source-Drain Breakdown Voltage	$V_{(BR)SD}$	$V_{GD} = V_{BD} = -5\text{ V}, I_S = 10\ \text{nA}$	22	20		20		
Drain-Substrate Breakdown Voltage	$V_{(BR)DB}$	$V_{GB} = 0\text{ V}, I_D = 10\ \text{nA}$ Source OPEN	35	25		25		
Source-Substrate Breakdown Voltage	$V_{(BR)SB}$	$V_{GB} = 0\text{ V}, I_S = 10\ \mu\text{A}$ Drain OPEN	35	25		25		
Drain-Source Leakage	$I_{DS(OFF)}$	$V_{GS} = V_{BS} = -5\text{ V}$	$V_{DS} = 10\text{ V}$	0.4				nA
			$V_{DS} = 20\text{ V}$	0.9				
Source-Drain Leakage	$I_{SD(OFF)}$	$V_{GD} = V_{BD} = -5\text{ V}$	$V_{DS} = 10\text{ V}$	0.5				
			$V_{DS} = 20\text{ V}$	1				
Gate Leakage	I_{GBS}	$V_{DB} = V_{GS} = 0\text{ V}, V_{GB} = 30\text{ V}$	10^{-5}					μA
Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS} = V_{GS(th)}, I_S = 1\ \mu\text{A}$ $V_{SB} = 0\text{ V}$	0.7	0.5	2	0.5	2	V
Drain-Source On-Resistance	$r_{DS(ON)}$	$V_{SB} = 0\text{ V}, I_D = 1\ \text{mA}$	$V_{GS} = 5\text{ V}$	58				Ω
			$V_{GS} = 10\text{ V}$	38				
			$V_{GS} = 15\text{ V}$	30				
			$V_{GS} = 20\text{ V}$	26				
			$V_{GS} = 25\text{ V}$	24				
DYNAMIC								
Forward Transconductance	g_{fs}	$V_{DS} = 10\text{ V}, V_{SB} = 0\text{ V}$ $I_D = 20\ \text{mA}, f = 1\ \text{kHz}$	11					mS
Output Conductance	g_{os}		0.9					
Gate-Node Capacitance	$C_{(GS+GD+GB)}$	$V_{DS} = 10\text{ V}, f = 1\ \text{MHz}$ $V_{GS} = V_{BS} = -15\text{ V}$	2.5					pF
Drain-Node Capacitance	$C_{(GD+DB)}$		1.1					
Source-Node Capacitance	$C_{(GS+SB)}$		3.7					
Reverse Transfer Capacitance	C_{rss}		0.2					
SWITCHING								
Turn-On Time	$t_{d(ON)}$	$V_{OD} = 5\text{ V}, R_L = 680\ \Omega$ $V_{IN} = 0\text{ to }5\text{ V}$	0.5					ns
	t_r		0.8					
Turn-Off Time	$t_{d(OFF)}$		2					
	t_f		6					

NOTES:

- a. $T_A = 25^\circ\text{C}$ unless otherwise noted.
- b. For design aid only, not subject to production testing.